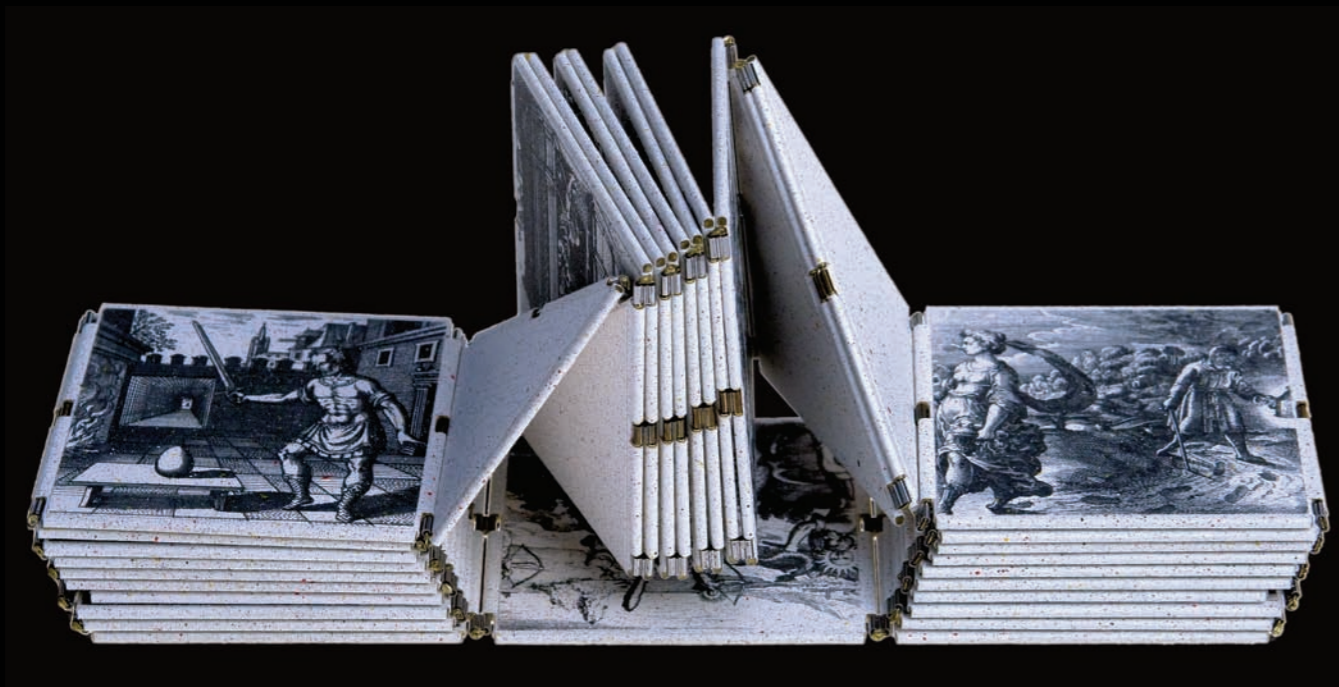


GUILD OF BOOKWORKERS JOURNAL 2009

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On the Cover:
Dog Story by Daniel Kelm

Back:
Neo Emblemata Nova by Daniel Kelm



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and a Daniel Kelm Gallery
Alegria Barclay

Mary Crease Sears: A Complete Bookbinder
Kristin Parker

Ergonomics and Injury Prevention in the
Book and Paper Lab
Douglas Sanders and Nicole Wolfersberger

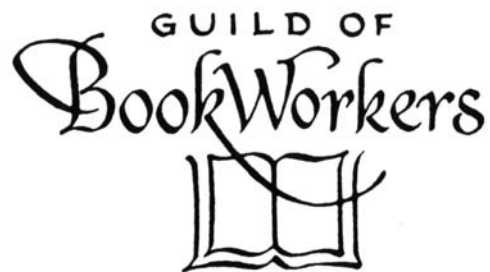
Journey to a World of Books in Spain
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by Ernst Collin
Translated by Peter D. Verheyen

Surveys of Old Printed Books
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Accordion and Tunnel Books
Randolph Huebsch



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EDITOR'S NOTE

CARA SCHLESINGER

FROM ITS FOUNDING IN 1962, the Guild of Book Workers Journal has served as a source of information about the tools, techniques, and people of the book arts. Originally published three times a year and including news about Guild activities among its articles, the Journal gradually shifted its focus to emphasize technical, historical, and scholarly articles. In recent years it has brought the proceedings of the annual Standards of Excellence seminars to the entire membership, reaching a much broader audience than the seminars alone could include.

You now hold in your hands a redesigned, full-color, peer-reviewed Journal that has once again broadened its scope. The annual GBWJ will publish full-length articles and photo galleries addressing all aspects and periods of the book arts and crafts, itself serving as a standard of excellence for our members and other readers, whether we are archivists, binders, book artists, calligraphers, collectors, conservators, curators, designers, historians, librarians, papermakers, printers, restorers, toolmakers, or typographers, and whether we are professionals in our fields or casual amateurs exploring new interests.

When you turn this page, you will find yourself faced with riches: profiles of binders, both contemporary and historic; galleries of images; an introduction to the versatility of two related book forms; a tour of Spain; a guide to ergonomics in the conservation lab, where the authors urge us to treat not only books but ourselves with care; considerations for digitizing early manuscripts and the role of artists' books in museums; and a translation of a 1922 German text in which a fictional binder engages his collector-client in a series of discussions about binding. As you read this particular piece, consider the similarities between the challenges faced by conservators and translators: how visible should the practitioner's hand be? How does one retain the essence of the original while making a piece accessible to a new population of readers? What sort of documentation should be provided for posterity?

It has been my great honor to midwife the new GBWJ into existence, but real thanks and credit are owed to those who made it happen: Jim Reid-Cunningham for envisioning new possibilities and ensuring continuity; Paula Jull for her magnificent design and Chad Johnson for his collaboration on the design and his impeccable typography; the entire editorial committee, named on the masthead, each of whom not only reviewed manuscripts for this issue but contributed in individual and significant ways to many aspects of content development and editorial policy. I would also like to personally thank my predecessors, Dorothy Africa and Signa (Judy) Houghteling, for their admirable devotion to the Journal and for setting the standard that I have been challenged to meet.



Daniel's collection of glass scientific instruments is housed in multiple file cabinets.

THE EDUCATION OF DANIEL E. KELM

THE PARKING LOT BEHIND THE GARAGE ANNEX SCHOOL FOR BOOK ARTS is a vast, cracked surface home to myriad weeds and occasional manmade debris. The building rising above it remains as a reminder of Easthampton's industrial past, a large weathered structure paneled with a multitude of windows reflecting the summer sun. As I pulled into the parking lot, I had no idea what to expect from my meeting with the mysterious Mr. Kelm, and my uncertainty was heightened by rumors of his association with alchemy and the mystical world. I was soon to find out that the reality of Daniel Kelm encompasses and exceeds the mystique that surrounds him in surprising and often enchanting ways.

I found Daniel in a quiet studio cluttered with an eccentric collection of objects and books that lined the walls and rested upon every flat surface. Wherever I turned, I discovered more evidence that this studio was the handiwork of a man who is part scientist, part poet, part mystagogue. There were thousands of books, whose subjects ranged from engineering to philosophy to natural science. An entire wall of glass cases enclosed obsolete scientific instruments, fascinating in what they reveal about humankind's imagination and ignorance. In an adjoining room, the drawers of a file cabinet cradle a collection of glass instruments from the early days of science. It was in this setting, amidst tangible proof of passion, that I began my interview with Daniel Kelm.

Given his many interests and wide expertise, I could have chosen to focus on any number of topics in this article. Poetic science, alchemy, the book as sculpture, the transformation of materials—all would certainly have made for rich reading. I decided, however, to write about what I know best: education. I knew Daniel had to be invested in teaching on a fundamental level because he founded the Garage Annex School for Book Arts for that very purpose in 1990. As a former teacher and recent student, I am always fascinated by what compels a person to teach, and I had a hunch that Daniel's answer would touch upon every aspect of his many pursuits.

TO TRULY UNDERSTAND DANIEL KELM AS A TEACHER it is necessary to know him as a learner. To hear him describe it, learning was an all-consuming love that soaked up his days and embroidered his dreams. He became enamored with chemistry at the age of seven and delighted in creating simple experiments. A naturally curious child, Daniel was intrigued by the nature and substance of things. He wanted to take everything apart and understand what made each thing move, function,



Alegria Barclay is an alumna of the North Bennet Street School book-binding program and a former high school English teacher. She currently works as a book conservator at the New-York Historical Society.

For information on Daniel Kelm's Garage Annex School for Book Arts, please visit <www.garageannexschool.com>. Further information about his work as exhibited at Smith College is available at <www.smith.edu/artmuseum/exhibitions/kelm>.

or simply exist. He was the epitome of the boy in the garage building spaceships, rockets, and toys from the seemingly useless materials that adults leave in their wake. In fact, the significance of the term “garage” in the names of both the school and his studio, the Wide Awake Garage, stems from this image: they are both the actualized fantasies of his younger self. Possessed of great imagination and intelligence, Daniel was enthralled not just with learning but also with knowing. His was a childhood devoted to questions, to discovery, and to knowledge.



Among his many books, Daniel possesses this small gem, a child's scientific text complete with detailed illustrations.

Daniel's passion for chemistry remained unabated throughout his adolescence, and he entered the University of Minnesota in 1969 determined to make it his career. A gifted and dedicated scholar, he quickly rose to prominence within the chemistry department, and by his senior year was asked to be a teaching specialist. The position, which entailed teaching organic chemistry to other undergraduates, was Daniel's first foray into being an instructor. He soon decided, however, not to complete his degree in chemistry at that time, and dropped out one quarter short of graduating. As he explains it, he loved learning and wanted to continue studying other subjects in the intellectually stimulating environment of the university while reevaluating his direction.

After a brief interlude in California, he returned to the University of Minnesota and accepted a full-

time teaching position in 1973. For a period of several years, Daniel taught general, inorganic qualitative analysis, and organic chemistry. The classes were a combination of lecture and laboratory work, requiring Daniel to master techniques of teaching both abstract and hands-on information—a skill that continues to serve him well as a bookbinding teacher. Indeed, in over four years as a chemistry teacher, Daniel taught more than 1,000 students, gaining a strong pedagogical foundation for his future work with book arts students.

It was while teaching chemistry that Daniel decided to switch his major from chemistry to philosophy. While this may at first appear to be quite a dramatic shift, the two disciplines are both devoted to the art of questioning and the eternal search for answers; they just approach the question from entirely different perspectives. In changing his major, Daniel sought to change his perspective. He had been “studying chemistry for twenty years and now wanted to know its underpinnings.” Accordingly, he began by studying the philosophy of science; when that failed to quench his thirst for answers, he turned to existentialism. The University of Minnesota was once very well known for its scholarship on Kierkegaard, and Daniel dove head first into the ongoing dialogue about subjectivity, truth, and the individual.

“By combining the perspectives of art and science, [one unifies] what is commonly thought of as separate.”

If chemistry was responsible for shaping his rational and academic self, then philosophy helped him to approach the world from a “poetic standpoint.” Prior to his shift in perspective, Daniel believed that all important information came from the intellect and that “emotion had nothing to offer us.”

That very statement led to one of his great moments of clarity, as upon uttering it, one of Daniel's colleagues gave him a swift kick to the shin. The physical pain, coupled with immediate outrage and subsequent confusion, were enough to convince him of the importance not only of emotions but also the body in our understanding of the world. This epiphany propelled him headlong back into the physical world and was directly responsible for Daniel's desire to learn bookbinding. In essence, he chose

to embrace the ghost in the machine by integrating his rational, emotional, and physical selves— or as he puts it, “by combining the perspectives of art and science, [one unifies] what is commonly thought of as separate.”

This act of integration lies at the heart of Daniel’s world view. Notably, the book is a nearly ideal representation of that integration: The content is a result of rational thought, the reader’s response comes from an emotional standpoint, and the book itself is part of the physical realm. It is no wonder that Daniel was drawn to bookbinding once he graduated with a degree in philosophy. The act of creating something by hand allowed him to become reacquainted with the visceral world after a lifetime of intellectual abstraction. Although convinced that bookbinding was the direction he wanted to take, it was easier said than done. Minneapolis in 1977 wasn’t exactly a hotbed of book arts and bookbinding instruction. But Daniel eventually found a librarian who had taken a class in simple cloth bindings and convinced him to teach others how to do the same. Thus began Daniel’s education in bookbinding. From the start, Daniel knew that he would have to leave Minnesota to truly be able to learn the skills he needed. And so he soon found himself in Massachusetts, a veritable hub of bookbinding activity.

IN THE EARLY 1980S, A SLEW of likeminded bookworkers had congregated in the Boston area, devoting themselves to the meticulous craft of bookbinding. They were continuing an age-old tradition that had come with the British, evolved throughout the Revolutionary War years, flourished at the turn of the century, and—albeit diminished—remains intact and thriving to this day. Having read an article about Sam Ellenport’s Harcourt Bindery and its school, Daniel arrived in 1978 to tap into the collective creative juices found there. He was fortunate to find work in Cambridge’s Tantalus Bindery, where he began his education in working with leather. While there, he signed up for a class at Harcourt; after completing the curriculum, he was hired and stayed on for three years as a finisher. Those three years proved to be foundational ones in his development as a bookbinder. Daniel has never been the kind of student who relies on a single source of knowledge; rather, he enjoys the interplay of thoughts and ideas as they entwine and recombine to

offer new sources of inspiration. He thrives on change and transformation, and his learning style reflects this. He has constantly sought a wide array of teachers coming from a myriad of perspectives in order to remain open to all manner of approaches. Harcourt provided Daniel with the ideal environment wherein he could learn by doing as well as partake in a ceaseless dialogue on all matters pertaining to the book. It is through his conversations with such visiting bookbinders as Bernard Middleton and Gary Frost, along with countless other students and bookworkers, that Daniel Kelm received his education.

As much as Daniel learned from those around him, he is simultaneously a self-taught man. By this I mean

he has spent his entire life actively composing questions and seeking out answers. In effect, he has orchestrated his own curriculum and hired his own teachers. When that was not enough, he created a new discipline, Poetic Science—an amalgam of alchemy, philosophy, and science, to conceive the world anew, providing fodder for progressively more interesting and unusual questions. Daniel Kelm is a man who finds immense joy in experiencing the world intellectually, emotionally and physically. Through his complex background, he has learned that such multidimensional experience

is as crucial to the creation of a beautiful binding as one’s technical skills. He states, “Through this fusion of body and mind, heart and head, matter and spirit, we are able to enter into a more intimate relationship with materials. And, having learned to distinguish their characteristic rhythms, [we] ask them each to lend their unique personalities to the expressiveness of our work.”

Daniel’s work is quite simply the living embodiment of his philosophy, the articulated incarnation

of his soul. A self-professed animist, Daniel sees living spirit in all things. His bindings are themselves imbued with that spirit; they are alive and they beckon us to come closer, to engage. Daniel creates his articulated sculptures in such a way that they require viewers to question what we know or perceive a book to be. In so doing he invites us into a dialogue with each other, with the object, and even with the artist. His book sculptures are “meant to be objects that help people to discover their own story. They are catalysts to exploration.” They are ultimately about relationships, and they illustrate the many pathways one can take to discover the nature of an object. Always an experimenter, inventor, and artist, Daniel delights in the “discovery of interconnection” and the novelty of transformation.

“One of the most interesting relationships is between the teacher and the student.”

Throughout my interviews with Daniel, these notions of interconnectivity, integration, and relationship arise again and again. Indeed, it is difficult to distinguish his work from his teaching and his teaching from his life, as all are an extension of these three basic principles. One could posit that Daniel’s teaching and work are perhaps the mind and body to his life’s soul. However we define it, it is abundantly clear that for Daniel Kelm, teaching is a life calling. His work is itself a kind of teaching, and his life is a result of what he learns from interacting with others. He says, “I find relationships to be most important, and one of the most interesting relationships is between the teacher and the student.” This is particularly true for Daniel, as teaching is very much about the creation of community and the celebration of dialogue. In his words, “education is about self-exploration and how you want to be in the world.” Ultimately, Daniel wants people to be happy, and he is a teacher because he is convinced he can help support people in their quest for happiness. When I asked him why he felt compelled to teach, he answered quite simply, “joy.”

Possibly because of his unorthodox background, Daniel is unlike any other teacher I’ve ever met. He has an infinite capacity for wonder and an extraordinary ability to treat every student’s question as if it were the first time he had ever heard it. His tremendous curiosity enables him to find uniqueness

in each problem, so that he never tires of the topic at hand. In class, Daniel prefers to use the Socratic method, which encourages students to question and, in questioning, find answers for themselves. This act of teaching through dialogue and discussion lies at the heart of both science and philosophy and creates a community of learners in each discipline. It is precisely this sense of community that Daniel is drawn to and seeks to create. He says, “I wanted to develop a community around this work.... There is so much fragmentation in society, I think we need this sense of cooperation and community.” This may seem a lofty goal, but to meet the man is to understand how he can bring together so many disparate souls. He possesses that enviable blend of enthusiasm, sincerity, and daring that all great teachers have. Hearing him speak of poetic science, functional sculpture, trust, and animism in one breath is to be given license to dream, to ponder, and to create. Daniel’s passion for life is catching, and it is no wonder that so many seek his tutelage.



The Garage Annex School classroom.

ONE OF THE GREAT STRENGTHS of the Garage Annex School is its custom curriculum. In Daniel's own words, "teaching is a collaboration." Potential students meet with Daniel to discuss what they want to learn. He views each encounter as the start of a narrative, and often begins the interview with "tell me your story." In approaching each person's story from an open stance, Daniel encourages a collaborative, student-centered model of learning based on mutual trust and honest engagement. As in the alchemical relationships he is so fascinated with, it is the combination of these two elements that is so transformative for both the teacher and the student. According to Daniel, "learning originates in this path-making." Each student's path towards discovery is different, and yet the process remains the same. Teaching thus unites the many key elements of Daniel's character and worldview. It is a function of questioning and dialogue, an outcome of experience and intellect, and

a testimony to the fundamental power of relationship and community.

Before I left, Daniel took me on a tour of the classroom, explaining some of his philosophy along the way. He sees "living spirit in everything...all carries its history with it when we work with it or have a conversation with it." In considering the "consciousness of the material" that we use, Daniel allows for a more fluid worldview, wherein everything is interconnected and alive with meaning. It is through a "conversation with the essence of each thing that work is created." Reflecting on this now, it seems to me that we are ourselves conscious material in conversation with each other and the world. And our work—possibly our very being—is created through a ceaseless dialogue with animate and inanimate things. In such a world as this, Daniel acts as both follower and guide, alternately beckoning and pushing us down the path to discovery.

A DANIEL E. KELM GALLERY



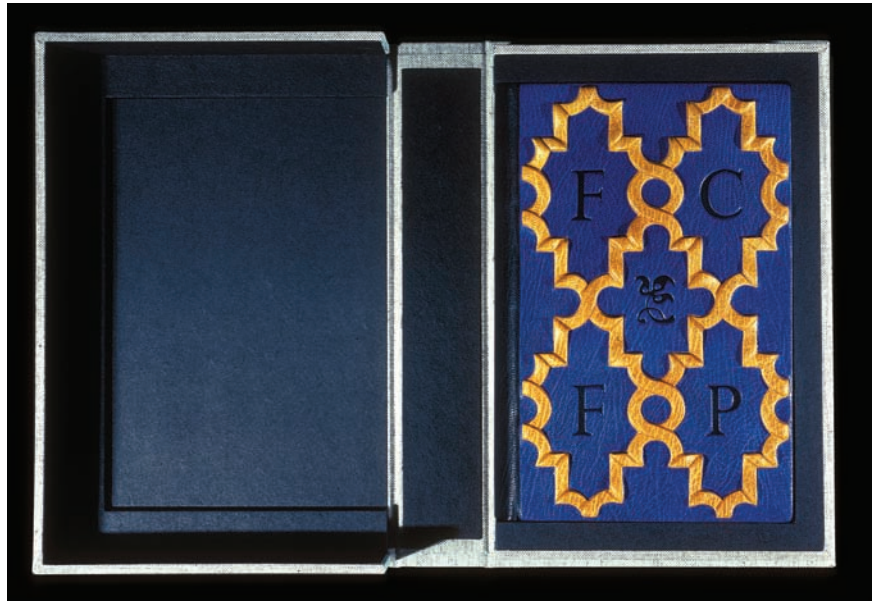
The Jumping Frog, text by Mark Twain; Cheloniidae Press, Easthampton, MA; 31 copies bound by Daniel E. Kelm, 1985.

Kelm used traditional French and English techniques in making this full leather binding. The interior text includes four images by Alan James Robinson of the jumping frog. Kelm reproduced two of the illustrations—using leather onlay and tooling—on the front and back covers of the book, and the remaining two—using leather onlay on Japanese tissue—for the pastedowns inside the front and back covers. The sequence of images evokes the experience of the frog jumping through the book. In addition, the box springs open like a jumping frog. Kelm calls this type of work "interpretive fine binding." (Fritz Eberhardt, during a visit to the studio, commented that he could not find a flaw with the binding.)

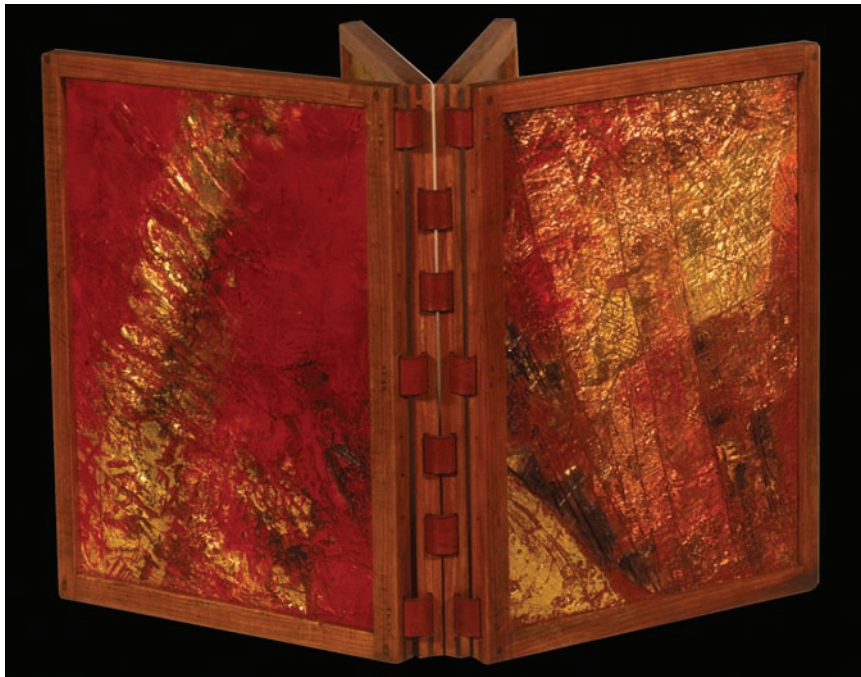
A DANIEL E. KELM GALLERY

Kelm moved to the Pioneer Valley in Western Massachusetts in 1982 in order to work for David Bourbeau at Thistle Bindery. His first project with David was the portfolio *Cetacea* for the Cheloniidae Press. The portfolio case for *Cetacea* featured low-relief sculptural elements cast in resin and covered with tooled leather (a controversial approach in the 1980s).

The binding for *Four Centuries of Fine Printing* (commissioned by Shelagh Smith, founder of the Canadian Bookbinders and Book Artists Guild, and her husband, Franklin, a book publisher) is a very early example of Kelm's exploration of covers with elements in relief. A strapwork design was used to represent the early period discussed in the book, but done in three dimensions to modernize it. The strapwork design was produced using cast, molded, and onlaid goatskin leather.



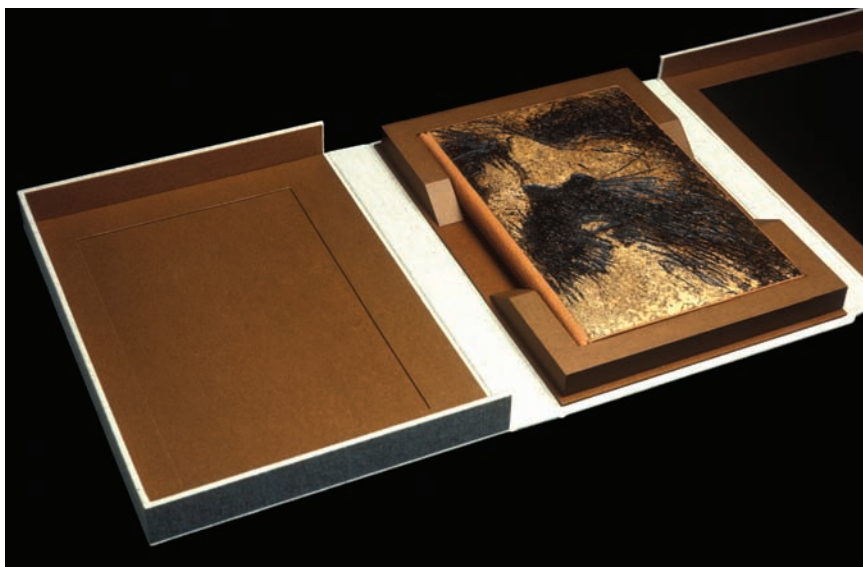
Four Centuries of Fine Printing, text by Stanley Morison; unique copy bound by Daniel E. Kelm, 1985.



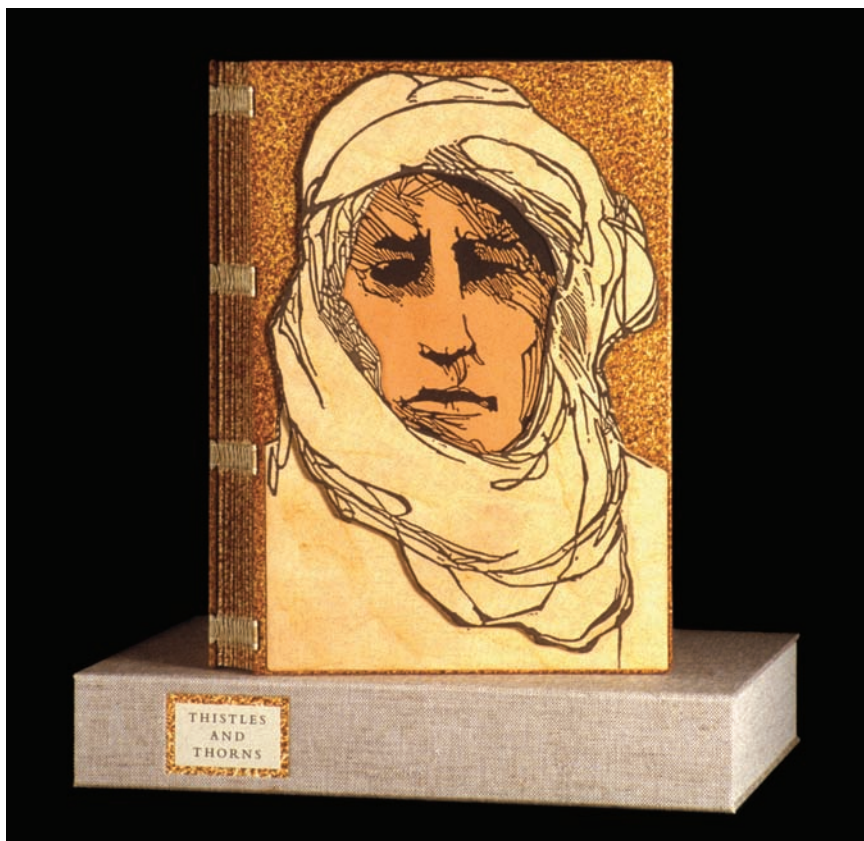
Book of the Red Night, artist's book by Marilyn Goodrich; unique copy bound by Daniel E. Kelm, 1992.

Marilyn Goodrich wasn't the first (or the most recent) artist to approach Daniel with her artwork and ask, "Can you make this into a book?" Kelm achieved the binding using roughly finished wooden frames combined with thick, oak shoulder leather straps, which were stained. The straps were pegged with wooden dowels into the frame edges.

This interpretive fine binding done in goatskin is housed in a box intended to allude to altars, which are mentioned in the text. One section of the box has a window that allows the low-relief sculpture on the front cover of the book to be displayed before the binding is completely revealed and accessible. In order to produce the low-relief sculpture, Kelm projected a transparency of Moser's image of Abraham's face onto a clay slab. Collaborating with artist Liz Solomon, the image was carved and sculpted in the clay. Kelm then produced a series of molds—silicon-rubber to plaster. The plaster molds were used to cast paper, allowing multiples of the relief sculpture of Abraham's face to be produced.



Thistles and Thorns: Abraham and Sarah at Bethel, text by Paul Smyth; wood engravings by Barry Moser; printed by Timothy Anderson, Harry Duncan, and Randolph Klauzer at Abattoir Editions in 1977, Omaha, NE; five copies bound by Daniel E. Kelm, 1987. This is the Abraham version; binding in box.



Thistles and Thorns: Abraham and Sarah at Bethel, text by Paul Smyth; wood engravings by Barry Moser; printed by Timothy Anderson, Harry Duncan, and Randolph Klauzer at Abattoir Editions in 1977, Omaha, NE; unique copy bound by Kelm, 1988. This is the Sarah version.

When Kelm bound this copy of *Thistles and Thorns* he wanted to try a different, low-relief cover design. There are three levels of flat surfaces: using photocopy transfer, Sarah's face was printed on goatskin suede, and the shroud and clothing were printed and stained on muslin. This binding is significant for being the first instance where Kelm used a concertina spine combined with what he refers to as a gutter wire. A significant advantage of the gutter wire is that it allows one to eliminate the kettle stitch—an inherently weak feature when not supported by spine linings. This binding, even without spine linings, yields a very strong, flexible book.



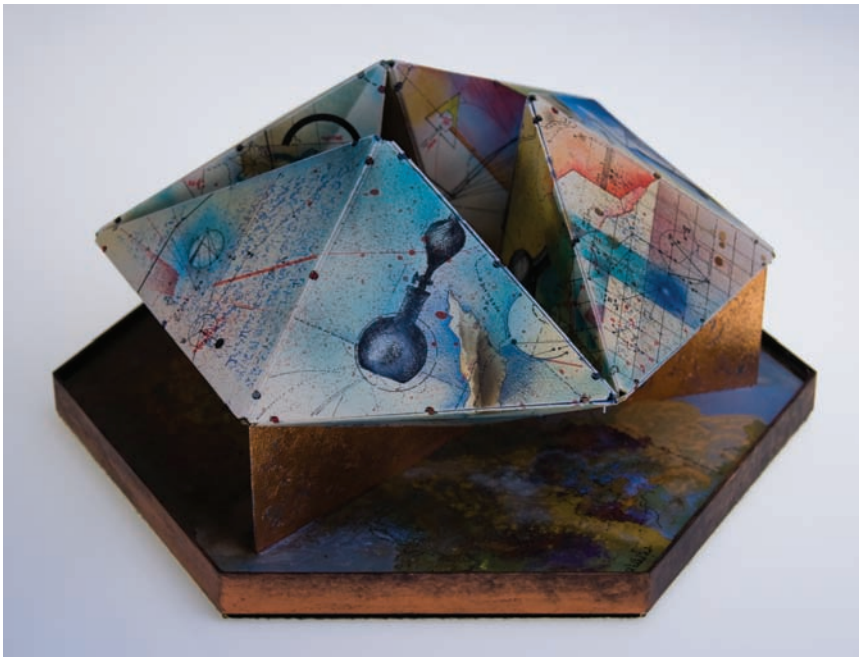
Mars; included in the box with the wire-edge-bound accordion book and related objects are two pamphlets: *Voice of Mars* text by Taz Sibley and a narrative text by Daniel E. Kelm; 15-copy edition bound by Kelm and the mechanics at the Wide Awake Garage, 1991–2005.

A number of Kelm's recently editioned works, including *Mars*, began as prototypes produced in time for his solo show at Granary Books in 1991. Here you see the accordion book's pentagonal pages partially pinned together. When fully assembled, the book creates a dodecahedron. The artist's book is rich in symbolism and includes what Kelm refers to as the "three faces of Mars": (1) a canister ball unearthed from a Civil War battlefield, representing the military face of Mars, (2) a chrome-steel ball bearing representing the industrial-scientific face of Mars, and (3) an iron nickel meteorite representing the celestial face of Mars. *Mars* is one of a series of artist's books by Kelm on the alchemical metals.

Earth is the earliest example of a Kelm binding with no permanent hinging; i.e., the pins can be removed and the pages completely disassembled. The pages can be assembled to create two of the Platonic solids (a series of simple, regular polyhedral forms first written about by Plato): a cube and an octahedron. Here you see all the pages combined to form a cubo-octahedron—an integration of a cube and an octahedron. This book is part of a series, the color scheme of which is alchemical. Black relates to the element Earth. Timothy Ely painted the pages, and has this to say about his work: "What I'm trying to do is assemble symbols in such a way that a shift occurs in the viewer. Language doesn't have to be verbal or visual. It can be a sensation. It can be in the form of signals. My marks depart from meaning but they're not meaningless. They just have a different internal matrix."



Investigations: The Four Elements: Earth, artist's book by Daniel E. Kelm and Timothy C. Ely, unique copy constructed by Kelm, 1989–2007.



Timothy Ely and Kelm have collaborated a number of times to produce unique artist's books. Kelm sculpted the forms and Ely painted the surfaces of this book (a hexaflexahedron) and box. Together they created *Terra Incognita*, a globe for an unknown, alien world.

Terra Incognita, artist's book by Daniel E. Kelm and Timothy C. Ely, unique copy constructed by Kelm, 1990–2004. Here you see the sculptural book sitting on the box bottom.



Here you see the collapsed book (partially disassembled); the pins that are used to bind the page edges, which allow for the assembly of the three-dimensional form; and the box bottom and lid.

Terra Incognita

A DANIEL E. KELM GALLERY

“Templum Elementorum” is Latin for “sanctuary of the elements.” *Templum Elementorum* was produced for the 1995 exhibition entitled Science and the Artist’s Book at the Dibner Library of the History of Science and Technology, the Museum of American History, Smithsonian Institution. While the first copy of *Templum Elementorum* was completed for the exhibition, the editioning process is ongoing.

The book sculpture was created in response to Biringuccio’s 1540 treatise *De la pirotechnia* (On working with fire), and the form of the sculpture is inspired by a type of alchemical furnace called the Tower of Athenor (“Athenor” is the “undying,” which is achieved by the use of the fuel hopper at the center of the furnace).

The sculpture consists of many pieces housed in a wooden crate. Upon opening the crate, various pieces are revealed, each wrapped in cloth the color of which corresponds to one of the four elements. Kelm created a glass cylinder that contains a metal binding for each of the four elements in his alchemical furnace. Colors, symbols, words, and metals all correspond to each the four elements: Earth, Water, Air and Fire.

Each glass cylinder represents a furnace within which one of the four alchemical elements is operating—sand bath, water bath, air furnace, and fire box. Each metal binding contains the “voice” of one of the alchemical elements, and slides into its corresponding glass cylinder.



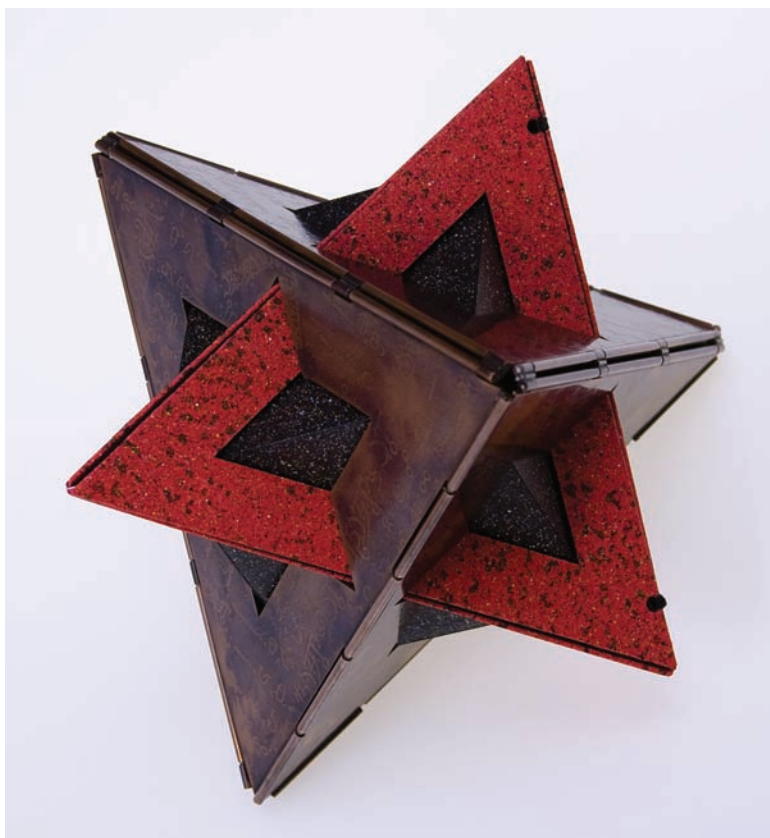
Templum Elementorum, artist's book by Daniel E. Kelm, 10-copy edition produced by Daniel E. Kelm with the assistance of Greta D. Sibley, Taz Sibley, Lynn Latimer, Erin Clay Nelson, Amy Borezo, and other mechanics at the Wide Awake Garage. 1994–ongoing.



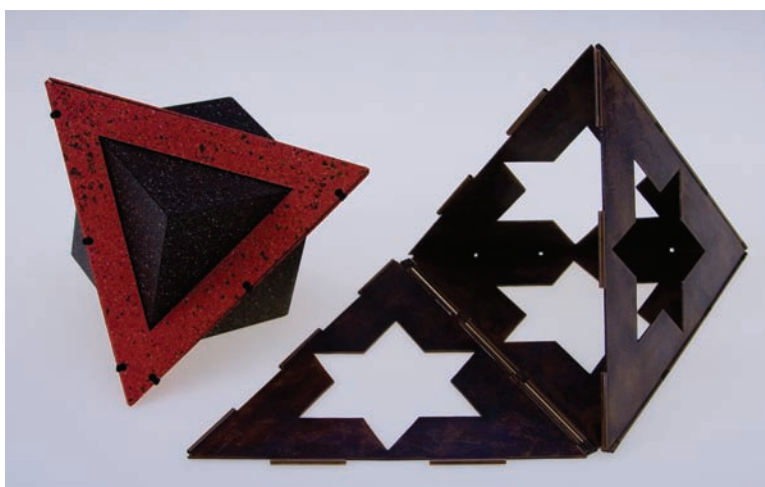
The metal binding, Water, opens to reveal a pop-up with the symbol for the element.



Venus is associated with the metal copper. Another in Kelm's series on the alchemical metals, *Venus* is fashioned from cut and etched copper, copper rod and tubing, solder, acrylic spattered paper, paperboard, stainless steel wire, and wire edge binding. The book consists of three separate pieces that nest together creating an integrated whole.



Venus, artist's book by Daniel E. Kelm, unique copy bound by Kelm with Barbara Crocker, 1991–2007. Three parts assembled.



Metal section separate from black and red sections. Here you can more easily see that the book sculpture includes three pieces: two tetrahedral accordion books and a cube.



Testimonial Book of Autographs presented to Isabella Gardner on her 69th birthday, 1909. Binding by Mary Crease Sears. Courtesy of the Isabella Stewart Gardner Museum, Boston.

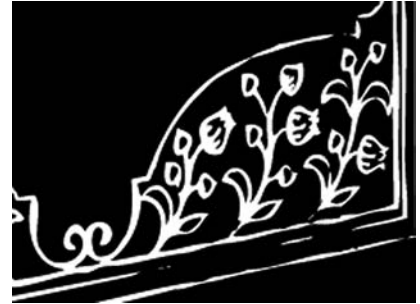
MARY CREASE SEARS: A COMPLETE BOOKBINDER

LYING ENCASED UNDER GLASS IN THE TAPESTRY ROOM AT THE Isabella Stewart Gardner Museum¹ is a book bound in leather and silver. The deep brown leather cover, raised bands along the spine, and the wrought silver mount that holds a dusty emerald all combine to give it a rustic though elegant look. The book rests on its back side in a glass-topped case which is pushed against an eight-foot-tall window, allowing light to rake over the surface, accentuating a leather cover that appears dried out and overheated. Its placement next to the window indicates its value to the owner. Window-lit spaces were reserved for Gardner's favorite artworks, including an intimate panel painting by Fra Angelico, the epic *Rape of Europa*, and a fragment of a Frederick Worth dress worn by Gardner herself. I have walked by the book for many years and always wondered about its contents. What made it so special?

My curiosity led me to the inventory and notes for the collection², and I discovered that it was a book of autographs bound by Mary Crease Sears that was presented to Gardner on her birthday on April 14, 1909. In 1951, twenty-seven years after Gardner's death, the book was taken out of its case for repair, and a new display case—glass-topped and lined with purple velvet—was made for it. This royal treatment by staff at the museum suggests that the book was an emotionally charged artifact for Gardner. Yet there it now sits, faded and unlabeled, mute in its glass coffer.

Isabella Stewart Gardner was one of the leading female patrons of the arts at the turn of the last century. She supported many upcoming and well known artists, writers and musicians, such as painter John Singer Sargent, writer Henry James, and opera singer Nellie Melba. Over the course of her life, she and her husband, John L. Gardner, built a remarkable collection of paintings, furniture, textiles, and objects, and arranged them in evocative installations. In 1900, the newly widowed Isabella constructed a museum in the Fenway area of Boston, in the manner of a Venetian palace, in which to display her collection. Interestingly, Isabella began by collecting books, inspired in part by her teacher, Charles Eliot Norton³, and her library contains approximately 2,500 rare books and manuscripts.

Mary Crease Sears must have been well known in her field to have made it into the sphere that would include commissions for Isabella, who, in 1909, was at the height of her collecting powers. However, almost nothing has been written about her in the surveys about bookbinding history in America. She receives a brief mention in Marianne Tidcombe's (1996) book, *Women Bookbinders 1880-1920*, which is one of the best-known



Kristin Parker holds a Master of Science degree from Simmons College and an undergraduate degree in anthropology and art history from Hampshire College. She has worked at the Isabella Stewart Gardner Museum for eleven years, first as manager of the artist-in-residence program, next as manager of the art collection, and has been the museum's sole archivist since 2005. She has lectured several times on the intersection of practices in museums and archives.

studies about women bookbinders. In her book *A Studio of One's Own*, Erica Hirshler (2001) notes Sears as a bookbinder, along with Amy Sacker, but Sarah Wyman Whitman, a designer of publisher bindings and all-around artist, receives an entire chapter dedicated to her work. According to the artists' biographies at the end of Hirshler's, Sears "became the most influential Arts and Crafts bookbinder in Boston." It makes sense that Gardner's friends would have chosen the preeminent bookbinder in Boston to craft their special birthday gift. Yet why is there so little written of her in the surveys of bookbinding history? Does Sears receive less attention than other women artists because bookbinding was considered a craft rather than a fine art?

TO PLACE SEARS IN CONTEXT I examined primary sources that describe the industry of bookbinding in Boston in the early twentieth century, such as *Outlook Magazine* and *The New Colophon*. In order to better understand how Sears may have stood out among her peers in the bookbinding community, I examined archival materials from the School of the Museum of Fine Arts, from which Sears graduated. After looking at bindings housed at the Houghton Library, I believe that the quality of Sears's workmanship stands out as much today as it did during her lifetime, among both male and female bookbinders.



A selection of Sears's practice boards.

Sears was active as a bookbinder from about 1900, taking commissions almost up until her death in 1938 (Anker 1950). Her obituary from the *Boston Evening Transcript* is brief, but it reveals an artistically robust life. It describes studies in Paris, exhibitions held, and

awards received. Interestingly, it states that Sears was founder of the Sears–St. John School of Bookbinding in Boston in 1901. She began her career at the Boston School of Drawing and Painting at the Museum of Fine Arts⁴ on October 3, 1882, and received her diploma three years later.

By 1885, advances in technology had initiated the industrial age and affected bookbinding manufacturing—"The careful handwork of the 18th century [was] eclipsed by machinery" (Van Kleeck 1913).

Does Sears receive less attention than other women artists because bookbinding was considered a craft rather than a fine art?

The bookbinding trade in America offered a wide variety of products, including edition, job, pamphlet, magazine, and blank book binding. While the industry was open to women who needed to work for a living, not all women knew how to bind books. Women were trained to participate in only portions of the process, including hand

folding, collation, sewing, and running errands. They were not invited to learn finishing; that was reserved for men.

As revealed in a study about women in the bookbinding trade produced by the Russell Sage Foundation in 1913, there had been many books written on bookbinding as a craft, "but not one has been found which contains facts regarding conditions of employment" (Van Kleeck 1913). These conditions must be examined in order to understand how Sears managed to succeed in a male-dominated field. By 1900, there were more than 15,000 women in the bindery trade, yet few of those women knew how to do any more than sew or collate. As author Claire Swift (1908) noted, "the woman who sews sheets is an entirely different person from the one who pares the leather, hammers the back or designs the cover." Work was found through word of mouth and training was informal and learned on the job. Training was further restricted by the trade unions, who dominated the binderies run by men. Due to mechanization and mass demand, job or artisan binders were less in demand and there were fewer jobs to be had. A supervisor at a New York bindery stated that if girls were more fully trained, "there would not be enough

openings for them in the trade” (Van Kleeck 1913). Artisan binding was also cost-prohibitive. Binders were taxed for raw materials, such as leather and paper, while bound books from abroad came in free of customs duties. “As anything but a commercial enterprise, bookbinding in this country is recent. The bibliophile still sends most of his rare books and precious first editions to France or England for a suitable and durable covering” (Swift 1908).



Tools belonging to Mary Crease Sears

The School of the Museum of Fine Arts, Boston, trained its students equally, both male and female. The school had an active student body, led by William Morris Hunt, and they received patronage from the wealthiest Boston families, including Isabella Gardner. The scrapbooks kept by the school from 1877 until the late 1930s describe the achievements of students as they made their way in the world. It was in this supportive environment that Sears gained the confidence to live her life as an artist and artisan. Alice Morse (1893) describes the determination of women as they made careers for themselves: “The feminine mind has ceased to view a professional career as a thing of a few years only, a mere incident in her life to bridge over some financial crisis, or gratify a whim; nor is she following art in a dilettante spirit. She enters our schools and studios with a determination to learn all she possibly can from steady, grinding, academic work, and from her teachers.”

WITH A THOROUGH BACKGROUND in fine art, Sears spent two more years studying design and opened an interior decorating business, probably in the mid-1890s. After some time, she resolved to learn the craft of bookbinding, despite the discouraging climate for

women. Writes Van Kleeck (1913), “If women are to succeed at all in bookbinding, they must look forward to owning their own shops.” With foresight and determination, Sears forged a career and obtained the training she needed that would allow her to open her own studio.

As noted earlier, trade unions weren’t keen to allow women to learn the “secrets” of their craft. Eventually, Sears found support in America through the binders C. Howard Walker in Boston and P. B. Sanford (who later worked at the Carnegie Library in Pittsburgh)⁵, from whom she learned design and finishing techniques. Eager to take her training further, Sears turned to France and England to see if she might work with the best binders in the world. While much has been written about the English binder Thomas James Cobden-Sanderson and how he offered training to women, it seems he took a limited number of pupils. Those hoping to work with French binders such as Léon Gruel found doors closed to them, despite letters of introduction. Through pure

She resolved to learn the craft of bookbinding, despite the discouraging climate for women.

determination, Sears studied finishing with Jules Domont, where she met kindred spirit and fellow American Agnes St. John. St. John had arranged to study with Gruel’s head assistant, M. Provost, and Cobden-Sanderson. It is likely that Sears spent some time at the Doves Bindery, confirmed by a binding I’ll describe

further on. Sears and St. John formed a harmonious partnership, evidenced by the bindings they produced upon their return to Boston, around 1900. The Sears–St. John School of Bookbinding existed from 1901 until Sears’s death in 1938.

Most of the women at work in binderies during the late 1800s and early 1900s were working because they had to. While Sears’s alma mater offered scholarships for students to study abroad, there is no verification that she was supported in this way. Sears was unconnected to the working class women who struggled for a career of their own. Perhaps she didn’t suffer anxieties over a lack of commissions to assure her next paycheck. Because of this, she may have had a bit more freedom to indulge in her craft and hone her talent. “Through ingenuity and clever

contriving, [Sears and St. John] learned the paring of paper, the cleaning and repairing of old books and head-banding—all separate crafts, usually done for the binders by women outside, who [were] freelance and not so restricted in teaching as those within binderies” (Swift 1908).

Sears and St. John took what they had learned of English forwarding and French finishing and merged the two styles. This emphasis on innovation is described by a former student of Sears’s, Rosamond Loring, who wrote of her teacher for *The New Colophon*. “Thirty years ago, I studied bookbinding in the studio of Miss Mary Crease Sears of Boston. She was a remarkable and inspiring teacher, who gave her pupils a solid foundation in bookbinding, as well as encouraging them to work out their own ideas” (Loring 1949). According to master bookbinder Joe Newman, rather than the typical “bastardization” of European styles that were common in America, Sears added a larger dimension to bookbinding⁶. In speaking about Sears, Newman described how struck he was by the amount of time Sears spent working on design elements. For a binding created to hold autographs and drawings sold to benefit the Fatherless Children of France Society, she sketched a memorial wreath twenty-five times by hand before working the design onto the leather. An article written about Sears and

St. John written in 1908 describes the quality of their work: “They blend a masculine vigor, sureness of aim, and a capacity for concentrated effort six days in the week, with a feminine patience of detail, a highly sensitized yet sure touch, and an artistic sense at once instinctive and assiduously developed” (Swift 1908).

IDENTIFYING BINDINGS CREATED by Sears at Boston-area institutions was difficult. Unsurprisingly, binders are often left unmentioned in catalogue records, similar to photographers in visual collections. However, with a little help from Google Book, I came across a reference from a 1950s publication that identified five bindings at the Houghton Library at Harvard University.

Handling Sears’s bindings is a pleasure. One binding that has been noted by several authors is *Flowers of Song from Many Lands*, by Frederic Rowland Marvin. It was designed by Sears and executed by both Sears and St. John. The boards are covered in 1,007 bits of morocco leather, forming a mosaic of tulips in violet, soft green and ocher. Each piece was applied

There is a confidence in Sears’s tooling illustrated through deep sure lines.

separately and blind tooled. The text block is wrapped in gold tissue. The boards rest warmly on the palms and the easy hinge invites the reader to open and enjoy. There is a confidence in Sears’s tooling illustrated through deep sure lines.

Another binding of note is *Seven Poems & Two Translations*, by Alfred Tennyson. Bound in dark blue morocco, it is slim, polished, and modern looking. Four panels in descending sizes and tooled in varying shades of gilt, from orange to light gold, adorn the center of the cover. Between the lines of gold is a band of silver of greater width. The effect is unexpected but subtle, and it captures the eye. Sears has lettered her name in gold along the bottom doublure. Interestingly, the book was printed at the Doves Bindery in 1902, linking her to the most famous bindery of the day. In February 1915, a journalist visited Sears’s home to look at examples of her bindings and came up with vivid descriptions of her bindings: a book of photographs is described as a “peacock,” and an altar book (the one now at Houghton Library) as having the “dignity of a



A template with teaching notes in Sears’s hand: “These are not the tools to be used but they give a rough idea.”

cardinal.” He writes, “varied as these books are, the underlying philosophy of their workmanship is identical, and profoundly serious: for Miss Sears holds and teaches that the binding of books, like the formation of character is a rugged business in which culture must be founded in honesty” (Bergengren 1915).



Practice boards made by Sears. On the left is the model used for *Flowers of Song from Many Lands*.

SEARS WAS THE ONLY BINDER to receive a gold medal at the St. Louis Exposition of 1904, and in 1914 the Society of Arts and Crafts awarded Sears their gold medal and certificate of master craftsman. F.W. Coburn wrote an article in 1916 highlighting a commission for an altar book executed by Sears, who worked with silversmith Alfred Stone to create an extraordinary binding reminiscent of a medieval volume. Silver encasements on the front and back covers were cut from a single piece of silver. More than 10,000 small rivets bound the leather to the backing. Coburn wrote, “It is certainly one of the most artistic and thoroughly wrought productions of the American handicraft movement to date. The restraint and simplicity of the design are thoroughly commendable.” Years of experience, coupled with natural artistic talent and determination, elevated Sears from the young student sketching in drawing class thirty years before into one of the foremost bookbinders in America.

Sears’s professional life is just one story of the many that describe the intellectual and artistic journey of women in America at the turn of the twentieth century who dared to diverge from the career path that was set out for them. However, while this is a tale of a woman who confronted limitations imposed by

gender, it is also the classic story of an artist learning to succeed through hard work and true purpose. “The tale of how Sears and St. John acquired their skill illustrates the typical universal struggle to do any work surpassingly well” (Swift 1908). Sears became a role model for other artists, especially women, becoming an active member of the Society of Arts and Crafts and the Columbian Exposition. She was instrumental in starting up the bookbinding studio at the Cranbrook Academy of Art in Michigan, and continued to receive recognition for her work until her death in 1938. According to Joe Newman, she was the first master bookbinder in America. She stands out from

Years of experience, coupled with natural artistic talent and determination, elevated Sears from the young student sketching in drawing class thirty years before into one of the foremost bookbinders in America.

the hobbyist bookbinders and those that concentrated on publisher’s bindings as a way to share their talent. She treated each book individually, wholly, and with great care. She was able to execute the ornate and fashionable medieval bindings desired by wealthy clients, the ornate art nouveau style made common by Cobden-Sanderson, as well as simple, classical looks using blind tooling and simple panels. One can imagine how the shelves containing her bindings would have glowed with their gilded and silvered light.

Unless otherwise noted, photographs are taken by the author of objects from the personal archive of Mary C. Sears, courtesy of the estate of Joseph Newman.

BINDINGS AND OTHER WORKS BY MARY CREASE SEARS

HOUGHTON LIBRARY, HARVARD UNIVERSITY, CAMBRIDGE

Milton, John. *Areopagitica*; a speech of John Milton for the liberty of unlicensed printing, to the Parliament of England. With an introduction by James Russell Lowell. New York: The Grolier Club, 1890. Bound in full dark green

KRISTIN PARKER

morocco by Mary Crease Sears; gilt borders & panels on covers & spine; pink moiré doublures & lining-leaves; in cloth case.

Marvin, Frederic Rowland. *Flowers of song from many lands; being short poems and detached verses gathered from various languages and rendered into English by Frederic Rowland Marvin*. Troy, N.Y.: Pafraets Book Company, 1902. Bound in green morocco, inlaid, by Mary C. Sears; in case, 29 x 20 cm.

Rossetti, Dante Gabriel. *Hand and Soul*. Portland, ME: Thomas B. Mosher, 1899. Rebound in full red morocco, gilt, by Mary C. Sears.

Khayyam, Omar. *Rubaiyat of Omar Khayyam / rendered into English verse by Edward Fitzgerald*. Portland, ME: T.B. Mosher, 1900. Bound by Mary Crease Sears in full green morocco; gilt borders & panels on covers & spine; green morocco doublures, gilt & inlaid; green moiré fly-leaves; top edges gilt; in green cloth case.

Tennyson, Alfred. *Seven poems & two translations*. Hammersmith: The Doves Press, 1902. Blue morocco gilt.

Episcopal Church. *Book of common prayer*. New York: Henry Frowde, Oxford University Press American Branch, 1903. Bound in red morocco gilt by Mary C. Sears.

ISABELLA STEWART GARDNER MUSEUM,
BOSTON.

Book of Autographs, 1909. Parchment bound with brown morocco. Silver mounted set with emerald.

MUSEUM OF FINE ARTS, BOSTON
8 Bookplates, 1898-1901. Photo-mechanical. Given by the artist, Mary Crease Sears, ca. 1901

RARE BOOK ROOM, WESTERN MICHIGAN
UNIVERSITY LIBRARIES, MICHIGAN
Frank Allen Bookplate Collection. The collection is divided into three parts, including the Mary Crease Sears Collection. Includes original pen and ink sketches and block prints of finished designs.

NOTES

1. The Isabella Stewart Gardner Museum, Boston, opened on New Year's Eve, 1903. Three floors of galleries,

containing paintings, sculpture, tapestries, furniture, and decorative arts from cultures spanning thirty centuries, are constructed around a central courtyard, based on a Venetian palazzo. The arrangement of objects was installed by art patron and collector Isabella Stewart Gardner (1840-1924).

2. Inventory and Notes, ISGM curatorial records. The "I & N" binders were produced ca. 1930 and contain catalog records for the collection.

3. Charles Eliot Norton (1827-1908) was a professor of art at Harvard College. In the 1880s, Isabella Gardner attended lectures on art history and readings of Dante given by him at Harvard. This sparked a passion for Dante, and book collecting in general, and Gardner began to buy rare editions and manuscripts.

4. Now the School of the Museum of Fine Arts, Boston.

5. Unidentified author. *The Boston Globe*, April 14, 1907. Courtesy of the Mary Crease Sears archives, maintained by Sarah Smith.

6. Telephone interview by author with bookbinder Joe Newman. Boston, MA, March 22 and April 12, 2007. While seeking a stamping press, bookbinder Joe Newman came across the personal archive of Sears, which had been saved by Ethel Smith, who was a student of Margaret Danforth, one of Sears's best students. The collection contains the remnants of Sears's studio, including brass type, finishing tools, presses, hand tools, and leather, as well as hundreds of designs for bindings sketched on paper and news clippings. The collection is managed by Sarah Smith at the Northeast Document Conservation Center, Andover, MA.

REFERENCES

Anker, Jean. 1950. *Libri*. Copenhagen: Munksgaard.

Bergengren, Ralph. "A Complete Bookbinder." *House Beautiful Magazine*, vol. 37, February 15. New York: House Beautiful, Inc.: pg. 86.

Boston Evening Transcript. May 23, 1938.

Boston Sunday Herald. 1916.

Boston Streets: Mapping Directory Data. *Boston City*

Directory: 1885, 1905, 1925.

Available from <http://bcd.lib.tufts.edu/view_text.jsp?urn=tufts:central:dca:UA069:UA069.005

DO.00015&chapter=d.1905.su.Sears>. Accessed March 15, 2007.

Cockerell, Douglas. 1902. *Bookbinding and the Care of Books: A Handbook for Amateur Bookbinders & Librarians*. New York. Available through <<http://kclibrary.nhmccd.edu/19thcentury1880.htm>>. Accessed April 2, 2007.

Conroy, Tom. "English Bookbinders in the De Coverly/Cobden-Sanderson/Cockerell Tradition: A Teaching Genealogy." *The Abbey Newsletter*. Available from <<http://palimpsest.stanford.edu/byorg/abbey/an/an14/an14-1/an14-111.html>>. Accessed March 15, 2007.

Hirshler, Erica E., Janet L. Comey, and Ellen E. Roberts. 2001. *A Studio of Her Own: Women Artists in Boston, 1870-1940*. Boston: MFA Publications.

Houghton Library. 1949. *The Houghton Library Reports. Acquisitions*. Cambridge, Mass.: Harvard College Library.

Loring, Rosamond. "Colored Paste Papers." *The New Colophon*, January 1949, p. 33-36.

Morse, Alice C. 1893. "Women Illustrators." *World's Columbian Exposition 1893: Art and Handicraft in the Women's Building*, ed. Maud Howe Eliot. New York: Goupil and Company.

Newman, Joe. Telephone interview by author. Boston, MA. March 22 & April 12, 2007.

Newman, Joseph. 1995. "Mary Crease Sears Rediscovered." *Guild of Bookworkers Journal*.

Prideaux, Sara T. 1903. *Bookbinders and their craft*. New York: Charles Scribner and Sons.

Prieto, Laura R. 2001. *At Home in the Studio: The Professionalization of Women Artists in America*. Cambridge, Mass.: Harvard University Press.

"Publisher's Bindings Through the Decades 1880-1889." Available through <http://bindings.lib.ua.edu/gallery/decade/decades_1880-1889.html>. Accessed March 16, 2007.

School of the Museum of Fine Arts Scrapbooks. Books I, II, VI, VIII, XIV, 1881-1932. William Morris Hunt Memorial Library, Boston.

Swift, Claire Coburn. 1908. "The Fine Art of Bookbinding." *The Outlook*, Volume 90. New York: The Outlook Company. Pp. 433-440.

Thompson, Lawrence Sidney. 1954. *Hand Bookbinding in the United States Since the Civil War*. Copenhagen: E. Munksgaard.

Tidcombe, Marianne. 1996. *Women Bookbinders 1880-1920*. London & New Castle, Delaware: The British Library & Oak Knoll Press.

_____. 2002. *Bookbinding 2000. Proceedings: A Collection of Papers from the June 2000 Conference Celebrating the Installation and Opening of the Bernard C. Middleton Collection of Books on the History and Practice of Bookbinding*. Rochester, N.Y.: Melbert B. Cary, Jr. Graphics Arts Collection, Wallace Library, Rochester Institute of Technology.

Tidcombe, Marianne, and Lois Fischer Black. 1997. "Women Bookbinders 1880-1920." *College and Research Libraries*. 58, no. 6: 577.

Van Kleeck, Mary. 1913. *Women in the Bookbinding Trade*. New York: Survey Associates.

World's Columbian Exposition, and Harlow N. Higginbotham. 1898. *Report of the President to the Board of Directors of the World's Columbian Exposition*. Chicago, 1892-1893. Chicago: Rand, McNally & Co.



Paper Conservation Laboratory, E. Lingle Craig Preservation Lab, Indiana University–Bloomington.

ERGONOMICS & INJURY PREVENTION IN THE BOOK AND PAPER LAB

BOOK AND PAPER CONSERVATORS COMPLETE THEIR WORK WITH small and precise tools performing detailed, repetitive tasks. The tools are tailored to the job, rather than to the physical needs of the worker. This, combined with problematic workspace, poor posture, and poor work habits, may contribute to repetitive strain injuries that, if left unchecked, can become more and more serious with time. This article reviews the current literature on the topic, provides a personal experience of the subject by the coauthors, and then offers suggestions for identifying the causes and curbing the effects of repetitive strain injuries in the book and paper lab. For purposes of clarification, we use the terms Repetitive Strain Injury (RSI) and Cumulative Trauma Disorder (CTD) interchangeably throughout the text. Briefly, CTD is defined by the American Standards Institute (ANSI) in standard ASC Z-365 as “disorders of the muscles, tendons, peripheral nerves, vascular system or other tissues. CTDs can result from, be precipitated by, or aggravated by intense, repeated, sustained or insufficient recovery from exertions, motions of the body, vibrations or cold.”

MOST OF THE PROFESSIONAL CONSERVATION literature available on the subject of RSI tends to address overall workplace health concerns or very generally addresses the problem of repetitive strain injuries. Carpal Tunnel Syndrome was noted as early as 1987 in an article in *Art Hazards News*. The syndrome is described along with signs, treatment and very general prevention advice (Daum 1987: 1-3). A number of years later in a WAAC Newsletter, Stavroudis (1993: 39-40) and Westmoreland (1993: 37-38) describe the anatomy of the wrist and how stressing it can give rise to problems. They provide general behavioral tips for the avoidance of pain. Notably, they make only brief mention of several tasks reported to be of concern to the paper/book conservator, namely inpainting, scraping glue, sewing bindings and fabricating boxes. Following these articles, Babin (1994: 1-3) identified the fact that the conservator's job involves tools and tasks that can lead to injury. She provides diagnoses of different cumulative trauma disorders (CTD), but her advice for their remediation is directed chiefly at the tasks of the painting conservator. She also states the need for ergonomic desk and chair arrangement. Kennedy (2002: 157-164) writes in the AICCM journal from the perspective of a health and safety professional. She devises a methodology of assessing one's



Douglas Sanders is Paper Conservator for Indiana University Libraries, Bloomington. He has worked as a conservator for a number of institutions, including the Indiana Historical Society, UK National Trust, and Northeast Document Conservation Center, since receiving his MA Conservation of Fine Art from University of Northumbria, England.

Nicole Wolfersberger is Paper Conservation Technician for Indiana University Libraries, Bloomington. She previously worked at The Ohio State University after receiving her MLS Degree from Indiana University.

*Both authors can be contacted at:
E. Lingle Craig Preservation Lab
Indiana University Bloomington
851 N. Range Road
Bloomington, IN 47408
(812)-856-4463
dohsande@indiana.edu*

work environment, but the article gives little in the way of specific, practical steps a paper lab can take towards lowering risks. Caldwell Kaufman (2003: 1-4) outlines the selection process and features of equipment purchased for a Massachusetts Institute of Technology conservation lab. Most recently, a discussion occurred at an AIC-BPG Annual Meeting, where participants reviewed the workplace environment and recommended personal behavioral changes, such as the need for stretch breaks and proper configuration of the workbench area (Doyle and Kaufman 2004: 119-120).

To our knowledge, there hasn't yet been published clear-cut advice and instruction for changes to the lab environment, in terms of tools, for the prevention of RSI. We feel that our recent experiences with injury in the conservation lab will add to the literature and help our professional colleagues as they consider their own places of work and the health of their coworkers.

NICOLE WOLFERSBERGER, THE LAB'S conservation technician has worked in conservation labs part-time for several years. In April of 2008 she began working full time as a paper conservation technician at the E. Lingle Craig Preservation Laboratory at Indiana University. Within a few months she began noticing aching and fatigue, mainly in the right hand, wrist and arm. It grew progressively worse with time, but only after she began to experience numbness and tingling in the wrist at night did she share her concerns with her supervisor, Doug Sanders. Sanders is the lab's paper conservator, and after Wolfersberger's concerns were expressed, he recalled that she was the third book and paper technician he had worked with, in various conservation studios, showing signs of RSI. In hindsight, he now realizes that at the technician level tasks are of a more repetitive nature. One can generalize and say there are fewer breaks for administrative paperwork, computer use, and other tasks to take one away from the bench, as may be the case with more senior level conservators. Technicians tend to be assigned routine jobs of creating folders, constructing phase boxes, cutting mending strips, and encapsulating, all of which require a narrow range of motions to be repeated many times.

After we contacted our human resources department about the pain, the university helpfully provided an ergonomic evaluation, but it was largely focused on

the computer workstation. Wolfersberger spends most of her day at the bench, so while a better chair and keyboard setup was a step in the right direction, it did not address the bulk of the problem. Working with the university, she underwent a series of tests and was diagnosed with a combination of Carpal Tunnel Syndrome and Thoracic Outlet Syndrome. These are similar conditions that involve the compression of nerves, leading to pain, numbness and, if left untreated, possibly muscle atrophy and permanent nerve damage. The workplace was next audited by an occupational medicine coordinator with specific ergonomic training, and suggestions were made as to improvements in tools, work area, and posture.

The auditor visited the lab and thoroughly assessed all of the tools and fittings of the lab, including chair and bench height as compared to Wolfersberger's

Technicians tend to be assigned routine jobs that require a narrow range of motion to be repeated many times.

height; examined all of the tools; and observed her as she performed typical tasks. He interviewed her to determine what the most troublesome tasks were (in this case, lifting weights and cutting with a scalpel). He also made a careful note of general workplace atmosphere (temperature, ambient noise, lighting, etc.).

Any environmental discomfort can potentially cause a person to adapt in ways that might create RSIs (for example, constantly leaning in one direction to avoid a cold draft).

After the assessment, we received a comprehensive report that included several suggestions to improve performance and decrease pain (P. Viterisi, unpublished report). The report focused on three major areas for improvement: tools, workplace layout or environment, and employee habits.

TOOLS

Paper and book conservators rely chiefly on tools requiring fine manual dexterity to complete a task. Tweezers, microspatulas, small brushes, needles, fine scissors, bone folders, awls and punches, and scalpels are some examples. These tools have in common a small surface area to grip as well as a smooth, hard surface. Additionally, board shears and screw presses are used on a frequent basis.

The problem is that a prolonged pinch grip is required for their use, and a tendency to hold the wrist in extreme flexion and extension arises, especially where higher levels of pressure are needed, as in cutting board-weight materials and scoring cardstock for phase boxes. Over time, this can lead to reduced blood supply and impaired nerve conduction (i.e. pain, numbness, or tingling sensations).

Changes to the tool, grip and wrist/hand positioning can lead to greater comfort over the long term. Reducing pressure by cutting and scoring in multiple passes rather than once or twice also helps. Figures 1 and 2 illustrate poor grips of extreme extension and flexion. Also note the overly bent angles of the index finger joints. Figure 3 illustrates a much better grip, with the forearm in line with the wrist and hand. An ergonomically correct knife is also being used.

Recommendations for improving tools include:

1. Eliminate sharp edges where tools are gripped. For example, many Teflon and bone folders come with fairly acute edges. Scalpel handles and tweezers can have pointed handle ends, which cause discomfort. Metal can be ground or filed down; bone and plastic can be shaped with sandpaper.
2. Handles of circular cross section are more comfortable to grip, since they eliminate pressure "hot spots."
3. Surface texture must not be smooth or slippery, nor overly abrasive or rough. The brain receives feedback from the nerves in the fingers, giving information about the strength of grip needed. The fingers are much less strained if there is a slight texture or give (as in dense foam or rubber). If you improve the grip feedback, you lessen the pinching strain.

Existing tools can be adapted in a number of ways. Handle diameters can be enlarged by wrapping with foam (Volara, Ethafoam etc.) or grip liner (like that used on laboratory and kitchen shelving), or dipping in plastic solutions (Plastidip). Texture can be im-

Changes to the tool, grip and wrist/hand positioning can lead to greater comfort over the long term.

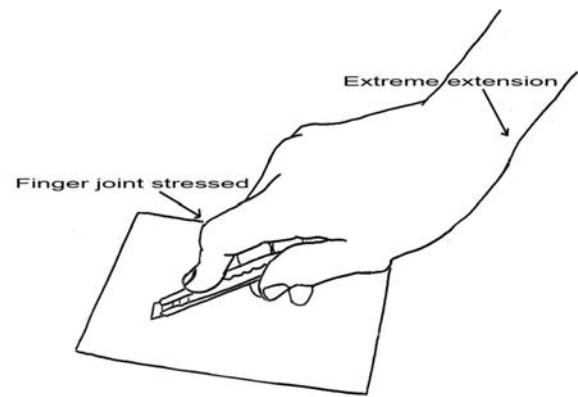


Figure 1

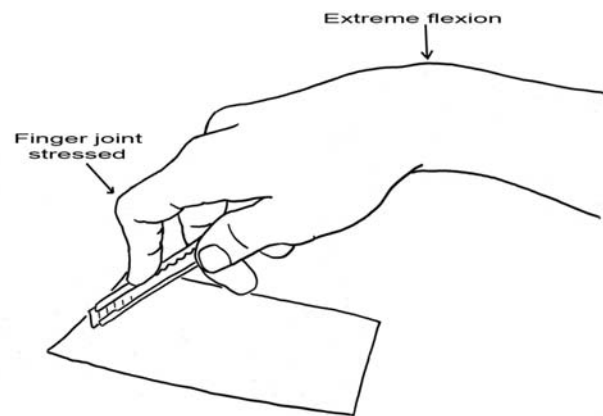


Figure 2

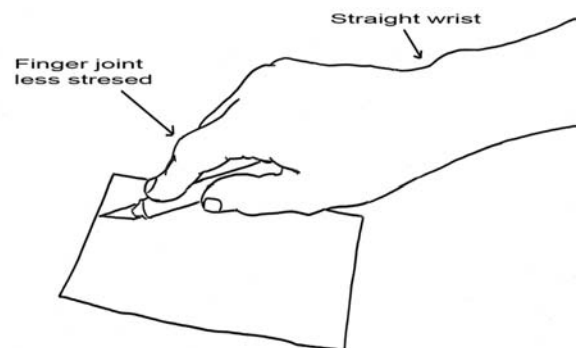


Figure 3

proved by use of a rotary tool (Dremel, Foredom) or file to create ridges or knurling. Alternately, handles can be whipped with leather cord or waxed sewing thread to create a rough surface. There are also a number of retailers of ergonomic tools for use in medicine, science, and high-tech applications, where the changes have already been incorporated (see the list of suppliers following this article).

In Figure 4, the bottom row contains tools that may lead to strain. The top row of tools has been modified or purchased to improve grip and comfort. The knife and tweezers now have larger, more tactile surfaces to grip. The microspatula has been wrapped with Volara foam. The tweezer has had its end ground to eliminate the point that dug into the flesh of the palm. The scalpel has had its end wrapped with electrical tape for the same purpose. The awl on the right side has had the wooden handle whipped with waxed thread to provide better grip. Finally, the brush along the top edge now has a foam grip applied. This grip was found at an online knitting supplier.

WORKPLACE LAYOUT

Our auditor showed us that in laying out an individual workspace, a “frequency of use” principle must be kept in mind. Workspaces can be divided into primary, secondary and tertiary zones. Briefly, the primary zone is where items can be grasped with the arm hanging loosely at the side or the elbow bent to 90 degrees. Tweezers, brush and paste would be located here for a mending job, for example. The secondary zone is where items can be grasped with the arm raised to a horizontal position and the elbow straightened. Blotter and Reemay squares and glass plates for weighting mends while drying might be in this zone. Finally, the tertiary zone requires full arm extension and forward leaning of the torso. One might keep a pencil and ongoing treatment record or project file at this distance. This type of set-up, based upon placement of the most frequently used items closest to the worker, is common sense, but it also lessens arm and back strain by reducing repetitive muscle strain. Figures 5 and 6 show the old and new workplace layouts (all tools in both figures have been modified).

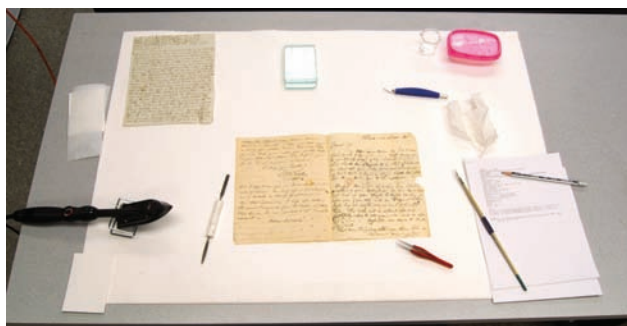


Figure 5. Old workplace layout.

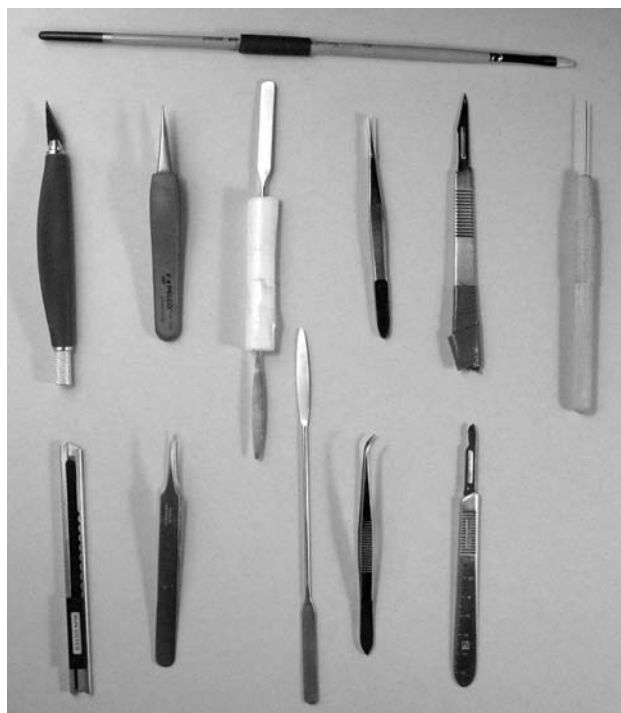


Figure 4

Another component of one’s work environment is of course the work table and chair. It is very easy nowadays to purchase a work chair that offers lower back support, adjustments for elbow height and torso length, and a support for one’s feet. A chair should be adjusted also to reflect the height of the work bench, so that one is not leaning too far forward or backward to perform tasks. Knees must be able to fall under the edge of the bench top in order to bring the chair close enough for work.

Finally, we were introduced to edge protectors. These are pads that are attached to the near edge of one’s workbench. Sharp table edges can reduce blood flow to the forearms when resting against them.



Figure 6. Workplace organized according to frequency of use principle.

They can also cause pain in the joints of the elbow. A rounded “waterfall” table edge, or edge protector will reduce localized compression. These are standard in many industries involving seated tabletop assembly, and are easily ordered online.

PERSONAL HABITS

Changes in tool design and work environment will aid in prevention and cure, but prolonged healing will not come without changes in behavior. Our audit outlined a number of sitting guidelines designed to lessen the ill effects of static postures and prolonged mechanical loading of one’s body.

1. Frequently change position. Sitting in one position for too long can restrict blood flow to muscles, causing muscle fatigue and soreness. Do some work standing up at a higher table.
2. Properly support the back and legs/feet. Use the backrest as much as possible during work or, if not possible, during breaks. Placing the feet on a footstool can improve stability of the torso and reduce muscle fatigue.
3. Avoid forward inclination of the head and upper body. This is difficult in conservation work, but as much as possible, try to avoid constantly leaning forward to do work. If this is not possible, take the time to frequently straighten out and stretch. Raising the work station or lowering the chair may also help.
4. Avoid twisted or asymmetrical working positions (commonly associated with items not located in their proper “work zones”).

Finally, we’ve found that we must take more frequent and regular stretching breaks while performing repetitive tasks. There are some good resources online, which illustrate stretches that can be done to rejuvenate and improve blood flow. Of course, please assess your own health first and consult with a doctor before performing stretching activities.

WHEN IT COMES TO HEALTH and safety, conservators often think more about the hazards and risks associated with lab chemistry than with the tools that aid us. An examination of equipment and the overall work environment from an ergonomic perspective can be very helpful in preventing repetitive strain injury from occurring.

As of this writing, six months have passed since

the diagnosis of Carpal Tunnel Syndrome, and we’ve begun implementing changes in the conservation lab. Existing tools have been adapted and new ones purchased. We’re more conscious of breaking up the day

Changes in tool design and work environment will aid in prevention and cure, but prolonged healing will not come without changes in behavior.

into a number of different jobs, or creating work circuits to relieve some of the prolonged repetition. The hardest change is behavioral. We forget to remind ourselves to stretch frequently, sit up, and give the eyes and back a rest. Knowledge of ergonomic tool design and increased awareness of our own habits puts us on the road to recovery. With foresight, awareness can also prevent injury before it becomes a problem.

SUPPLIER LIST

TWEEZERS

Available from PAC

(888) 903-0333

<http://www.gotopac.com/Ergonomic_Tweezers_s/556.htm>

GRIPS

Pencil grips:

Addicted to Crafts

(253) 925-5200

<<http://www.addictedtocrafts.com/ProductDetail?ProductDetail.SKU=6-758-510850&ProductDetail.ListIndex=127>>

For smaller items:

<<http://www.addictedtocrafts.com/ProductDetail?ProductDetail.SKU=6-758-656773&ProductDetail.ListIndex=101>>

Gripworks also has a wide variety of grips, which may be ordered in large quantities.

(800) 347-4783

<<http://www.gripworks.com/foam-grips.htm>>

Smaller quantities can be ordered from McMaster-Carr

(404) 629-6500

<<http://www.mcmaster.com>> (search for grips)

SCISSORS

Fiskars
SureSource
20 Constitution Blvd. South
Shelton, CT 06484-4302

General scissors: <http://www.fiskarscrafts.com/tools/t_titaniumnitride-no8softtouch.aspx>

Micro-tip: <http://www.fiskarscrafts.com/tools/t_comfort-grip-micro-tip-scissors.aspx>

KNIVES

Fiskars
<http://www.fiskarscrafts.com/tools/t_retractable-break-off-knife.aspx>

<http://www.fiskarscrafts.com/tools/t_softgrip-craft-knife-coastal.aspx>

<http://www.fiskarscrafts.com/tools/t_no-5-soft-grip-micro-tip-craft-scis.aspx>

VOLARA FOAM

The Foam Factory
(586) 627-3626
<<http://www.closedcellfoams.com/volara.html>>

ETHAFOAM

Gladon Preservation Products
(877) 445-2366
<http://www.gladon.com/preservation_products/preservation_products.htm>

EDGE PROTECTORS

Alimed
(800) 225-2610
<<http://www.alimed.com/Alimed/product/Deluxe-Edge-Rest,14446,132.htm>>

BIBLIOGRAPHY

Babin, Angela. January 1994. Ergonomics in Conservation. *AIC NEWS* 19, no. 1:1-3.

Caldwell Kaufman, Heather. 2003. Ergonomic Considerations for Furniture and Equipment in a New Conservation Lab. *Archival Products News* 10, no. 4:1-4.

Daum, Miriam. 1987. Carpal Tunnel Syndrome in Artists and Craftspeople. *Art Hazards News* 10, no. 6: 1-3.

Doyle, Beth and Heather Kaufman. 2004. Library Collections Conservation Discussion Group 2004: Ergonomics for Collections Conservators and Doing More with Less. *The Book and Paper Group Annual* 23: 119-120.

Kennedy, Margaret. 2002. Ergonomic Solutions for Paper Conservation. *AICCM Symposium 2002 Conservation of Paper, Books and Photographic Materials*, Melbourne, 17-19 April 2002: 157-164.

Stavroudis, Chris. May 1993. Facts about Cumulative Trauma Disorders. *WAAC Newsletter* 15, no. 2: 39-40.

Viterisi, Paul. 2009. Private correspondence.

Westmoreland, Rosamond. May 1993. Cumulative Trauma Disorders: Some Cautions for Conservators. *WAAC Newsletter* 15, no. 2: 37-40.



This sixteenth-century sign, posted in the Biblioteca de Salamanca, threatens excommunication to anyone stealing a book from the premises.

THE PILGRIMAGE: JOURNEY TO A WORLD OF BOOKS IN SPAIN

COMMENCING A PILGRIMAGE

Serious bibliophiles or booklovers should travel to Spain for a visit to its archives and libraries at least once in their lifetime with no less devotion than that of the Muslims in their required visit to Mecca as prescribed by Islamic law. The trove of magnificent manuscripts and printed works preserved in the Spanish institutions is emblematic of the artistic and cultural richness of the Iberian Peninsula, a feat that is difficult to equate or surpass by many other countries. According to Thomas (1984), Spanish bibliography has been disregarded on this side of the world, notwithstanding the fact that Spain was a major power during most of the existence of the printed book, particularly during the years of the hand-produced book.

Although I have traveled to Spain on several occasions, I made a pilgrimage there recently to visit some of the more revered temples of the word: the library of the University of Salamanca; La Biblioteca Nacional de España, the Royal Academy of History, and the Academy of Fine Arts of San Fernando in Madrid; the library at the Monastery of El Escorial on the outskirts of Madrid; and the archives of Medinaceli at the Hospital de Tavera in Toledo. It was also an opportunity to visit the extraordinary private library in Madrid of the Conde de Orgaz and the archive of his family in the city of Avila. The count is a member of the Spanish nobility who traces his ancestry as far back as the fifteenth century. There are very few private libraries that compare to this one in content and size. The richness of such family archives complements the public archives of Spain. It was truly a mystical experience, but it will be described in mortal terms.

A BRIEF INTRODUCTION TO SPANISH HISTORY

Spain received the art of printing in the early years of its spread. Presses were quickly and widely established throughout Spanish territory within the incunabula period. It was Spain that exported this art to the Americas over a hundred years prior to its arrival in the English colonies. The incunabula output of Spain was exceeded only by Italy, Germany, France, and Holland, and it surpassed that of Belgium, England, and all other countries. Paper, a most basic element for the book, was introduced in Spain by the Arabs around 1100 A.D., and from there it was exported to



Wilfredo A. Geigel is a trial lawyer in the jurisdictions of Puerto Rico and the U.S. Virgin Islands. He was an adjunct professor of history and law at the St. Croix campus of the University of the U.S. Virgin Islands. His research in history includes medieval and renaissance legal and maritime subjects, as well as the history of the book. Wilfredo Geigel has authored three books, including one in Spanish on the history of the book and its bindings, and several articles in English, among which are some on books and fine bindings. He has lectured on the history of the book and fine bindings in Puerto Rico, St. Croix, Mexico City, Salamanca, Spain, and at Middlebury College, Vermont. He is also a bookbinder with training at the binding schools of Telluride, Colorado, and Ascona, Switzerland.

the rest of Europe. Spain made major contributions to the general cultural life of Europe and to its art experience in particular. The archives and libraries of Spain are among the most voluminous in Europe, with an amazingly rich trove of materials for scholarly research (Thomas 1984). Thus, the southwestern corner in the map of the European continent, one of the Pillars of Hercules, has been excluded from the so-called Western cultural tradition when, in many respects, it should be considered at the center. A few historical comments will clarify this.

Hispania, as the Romans called their province of what later became known as Spain, is the gateway to the Mediterranean and the birthplace of a cast of characters historically and politically integral to the Western tradition. These characters include Hannibal the Carthaginian, the scourge

of Italy, (247–183 B.C.) and some of the most famous Roman emperors: Trajan (A.D. 98–117); Hadrian (A.D. 117–138); Marcus Aurelius (A.D. 161–180); Commodus (A.D. 180–192); and Theodosius I (A.D. 379–395). Lucius Annaeu Seneca (4 B.C.–A.D. 65), another well known Roman figure from this period, was born in Córdoba, Spain. Seneca was one of the great philosophers in Roman times and author of numerous works, of which forty are extant. His tragedies are among the most influential works in Western literature. During the Roman period there were two imposing cities in Spain: Augusta Emérita, now simply called Mérida, and Tolaitola, now Toledo. The latter was praised by Roman historian Titus Livius in one of his writings for the excellence of its defenses and fortifications. Because it was a provincial capital, it exerted the right to mint Roman coins.

Spain was invaded by the Arabs in 711 A.D., when they crossed from Northern Africa through the Strait of Gibraltar. With the Arabs, Spain received an extraordinary boost of cultural influence. This translated into a flourishing growth of art and letters, not least in the luxurious architecture showcased in the mansions and palaces of its rulers (Vennet 1999).

During the Arab period, Spain had the largest libraries in all of Europe and Córdoba, the Islamic capital, was the most cultured city in Europe.

During the Middle Ages, people living in towns in northern Europe were trodding through mud, while Córdoba and Toledo had paved and covered streets which were lit at night. When most urban areas in the rest of Europe were merely small towns and villages, these two cities surpassed the 200,000-inhabitant mark each, comparing in size only to Constantinople in Turkey and Teotihuacán in Mexico.

In the twelfth century, the famous Toledo School of Translators, where eminent Jewish, Muslim, and Christian scholars gathered, was founded to translate the classics, including texts of Aristotelian philosophy, which would have a decisive impact on European intellectual thought during the Renaissance (El Medkouri 2006). Its creation is usually attributed to the Christian Spanish king Alphonse X, also known as the Wise, but the school is much older. It dates back to the previous century, the time of Archbishop Raimundo, who promoted the translation of philosophical and theological works from Greek and Arabic into Latin. Thanks to his efforts, European universities became acquainted with neo-platonic Aristotelian philosophy. Moreover, translations were made of Koranic verses, Psalms from the Old Testament, and the books of Aristotle glossed by Arab philosophers such as Avicenna and Alfarubi. In fact, the translations from Toledo made it possible for oriental science to reach Europe (Candel 1995). It is important to underscore that during the time of Alphonse X, the translations turned to works in astronomy, physics, and mathematics. It should also be noted that the School of Toledo was not the only school of translators, for there were others, but the School of Translators of Toledo was and is the best known in historical and academic circles.

During the Arab period, Spain had the largest libraries in all of Europe and Córdoba, the Islamic capital, was the most cultured city in Europe. Together with Constantinople and Baghdad, Córdoba was one of the three cultural centers of the world (Hitti 1964).

The foremost Islamic philosopher and one of the most renowned figures in Arab civilization, Ibn Rushd Averroes (1126–1198), was born in Córdoba. He has been described as the founding father of secular thought in Western Europe (Salloun 1997). His commentaries on Aristotle's works and on Plato's *Republic* were instrumental in launching Latin Scholasticism and, in due course, the European Renaissance of the

fifteenth century. Averroes' works cover a variety of subjects, including early Islamic philosophy, logic in Islamic philosophy, Arabic medicine, mathematics, astronomy, grammar, theology, Sharia (Islamic law), and Figh (Islamic jurisprudence). He wrote at least sixty-seven original works, which include twenty-eight in philosophy, twenty in medicine, eight in law, five in theology, and four in grammar (Salloun).

In the fifteenth century, Spain was a great maritime power. The Spanish kingdom of Aragón ruled much of Italy, and before it ended, Spanish and Portuguese ships were sailing the oceans and planting their flags in the Americas, Africa, and Asia. Shortly thereafter, Spain ruled an empire on which, it was said, the sun never set. By the sixteenth century, the children of the Catholic monarchs Ferdinand and Isabella were in power throughout Europe in the role of emperor, monarchs, and consort of monarchs. At this time, while some libraries in Spain counted their holdings in tens or hundreds of thousands, those in northern Europe did not surpass double digits. In Spain, physicians studied medicine from learned treatises while judges applied the law from written codes, such as the *Fuero Juzgos*, the statutes created for individual cities, and *Las Siete Partidas*, the legal rules of social norms for the Kingdom of Castile.

SALAMANCA

From the fifteenth to the seventeenth century, the ancient city of Salamanca was the cultural center of Spain. It had enjoyed its prestige since Roman times. Plutarch, in his chronicles on Hannibal's campaign, describes it as a great and populous city in Hispania (De Casanova y Todolí 2006). Our pilgrimage began in this magnificent city, some of whose buildings date to the twelfth century.

LA BIBLIOTECA DE SALAMANCA (THE UNIVERSITY OF SALAMANCA LIBRARY)

In Spain, like most countries in Europe, the universities carry the name of the city in which they are estab-

lished. Salamanca is home to one of the oldest universities in Europe, the oldest in Spain: the University of Salamanca, founded in the thirteenth century. It and the University of Bologna share the honor of being the two most prestigious schools of law in all of Europe. The University of Salamanca has always been an integral part of the city, linked to its social, economic, and urban development. The period of greatest activity at the university took place between the end of the fifteenth and the beginning of the seventeenth century, and it was one of the major focuses of cultural enrichment in all of Europe. Salamanca was founded in 1258 (Casanova y Todolí 2006), and like all medieval universities in their earlier years, there was no campus, and classes were held in private homes or in professors' own homes. Neither were there administration buildings or dormitories, and it was not until the year 1413 that the university acquired its own building. At Salamanca it was a student who held the post of chancellor or rector. In the academic year of 1567-68, the population of the city was about 60,000 inhabitants, while the number of enrolled students was 7683.



The sculpted facade of the library of the University of Salamanca in the Plateresque style, a richly ornamental stone work over the main entrance to the library.

The only remaining portion of the original library, which was built in 1473, is about a third of its decorated ceiling, which is now being preserved with climate control. It is a beautiful representation of the night sky of Salamanca, showing the stars and constellations together with the zodiac signs and figures (Martinez Frías 2006). The new library, built in the 1520s, enjoys an entrance that is crowned with a magnificent façade in the Plateresco style. This is a particular Spanish Renaissance ornamental style developed during the first part of the sixteenth century. One must stop and step back to admire the work of art depicted over the entrance, a huge, harmonious tapestry-like facade about twenty meters high made from the golden stone of nearby quarries of Villamayor. It is an allegory of power, virtue, and political propaganda. In order to understand its meaning, it is necessary to read a sixty-four page descriptive booklet, *La fachada de la Universidad de Salamanca*, by Cirilo Flores Miguel (2001), one of several dedicated to its interpretation.

As one enters the building, on the first floor, one first finds six classrooms, two of which are *magna aulas*, or large classrooms. One is the seat of the examining tribunal, which hears students' defenses of their dissertations, while the other, amphitheater-like, is dedicated to the great Spanish thinker of the twentieth century, Miguel de Unamuno, who lectured there. The stairway to the second floor is adorned with a sculpted balustrade bearing iconographic representations of the Renaissance spirit and the ascension toward learning or knowledge. Visitors then approach the exquisite reading hall, which must be observed from behind glass panels. But, since we knew the director, Dr. Eduardo Hernández Pérez, he led us in through his chambers.

The reading hall is majestic, about two hundred feet long and fifty feet wide with a vaulted Gothic ceiling no less than fifty feet high. The walls are lined with two-story wooden bookcases dating to the eighteenth century. They are divided into fifty-two sections, one for each week of the year. The bookcases contain more than 125,000 printed books, of which 42,000 are considered rare, including over 400 incunabula and over 3,500 manuscripts. The library's codex holdings are the third most important in Spain, ranked after the Biblioteca Nacional and the library of El Escorial.

Since Dr. Hernández Pérez knew of our interest in bookbinding, he had made a selection of bindings to show us. These included bindings from the fifteenth, sixteenth, seventeenth, and eighteenth centuries. There was also a chained book, which showed that the stealing of books from libraries goes back several centuries. We had the opportunity to examine an atlas by Willem Janszoon Blaeu (1581-1638), one of the most famous Dutch cartographers. We were shown an early book on astronomy, *Speculum Astrologiae*, masterfully censored by a member of the Spanish Inquisition, who crossed out entire passages from many pages with heavy black ink, glued blank paper over suspect text or simply tore out entire pages. The Inquisitor had autographed the title page, authorizing the reading of what was left untouched. We also

We were shown an early book on astronomy, *Speculum Astrologiae*, masterfully censored by a member of the Spanish Inquisition.

viewed a collection of bookmarks left in the books by some of their readers from centuries past. They included some unusual ones, such as eyeglasses, ribbons and the rarest one, a condom.

To complete the tour, the vault where the treasures of the library are kept was opened so we could inspect its holdings. The vault is an eight- by fifteen-foot room built and beautifully decorated in 1614, its walls lined

with wooden bookcases to house the precious manuscripts and incunabula preserved in the collection. There is an *arca boba*, a trunk with five locks, where the university originally kept valuables, objects and books offered as guarantees for loan. There I was able to examine the *Liber Canticorum*, probably the oldest manuscript in the collection; an illuminated pocket Bible, circa 1050; an eleventh-century book of Psalms about which the director discussed the repairs required on the binding; the Biblical comments by Lyra; and the *Codex Sancti Iacobi* of the thirteenth century. On the way out of the library we saw, posted clearly over the door, a sign, probably dating from the end of the sixteenth century threatening excommunication to anyone stealing a book from the premises. The director presented us with a copy to post on the door of our library.

MADRID

Our next stop was Madrid, the capital of Spain and the geographical center of the country. A beautiful city with wide, tree-lined avenues, Madrid is comparatively modern, having been founded by King Phillip II in 1562. We were hosted the first night at the residence of the Count of Orgaz, a descendant of the subject of one of El Greco's famous paintings, *El entierro del Conde Orgaz* (The Burial of the Count of Orgaz), a sixteenth-century masterpiece. Most of the walls of the residence of the present count are lined with bookshelves from floor to ceiling with books on a wide variety of subjects. Several days later we visited the family archives in the city of Avila.

LA BIBLIOTECA NACIONAL DE ESPAÑA
(NATIONAL LIBRARY OF SPAIN)

The Biblioteca Nacional de España is one of the great libraries of the world. Its early holdings came from royal libraries, and manuscripts were later added that had been brought from France by Phillip V in the early eighteenth century. The Biblioteca Nacional possesses one of the richest collections of medieval manuscripts, many of them illuminated, numbering over 1,600 codices. Since its early foundation, the library has continued its acquisition process through the purchase and receipt of donations of hundreds of thousands of manuscripts, printed books, maps, works of arts, and other objects. In 1869, through the power of eminent domain, it acquired archives, libraries and art objects belonging to the Catholic



Entrance and façade to the Biblioteca Nacional. Before the center of the steps is a statue of Alphonse X, also known as the Wise.

Church, some of which were later returned. Those that were kept are of great antiquity and of great historic and codicological value.

As we entered the library we were ushered into a reception hall carpeted in vivid red, where we were greeted by Dra. Milagros Del Corral, director of the library. A display of some of the holdings had been set up for us on large tables. One of the tables held works by Goya from 1799 and 1822; a 1624 engraving by José de Ribera (1591-1652); a 1514 xylograph by Durer and another from 1515; two aqua fortes, one by Rembrandt and one by Piranesi; and a drawing by Alonso Cano done circa 1649. There was a 1733 map of the British Empire in America by Popple and another map, the Plan of Operations of General Washington against the King's troops in New Jersey that was dated April 15th, 1777. A second table held a *Catecismo de Pedro de Gantes*, one of the first catechisms printed in the Americas. There was a *Comentario al Apocalipsis*, by Beato de Fernando I from 1047; the *Liber de Laudibus Sancta Crucis*, (Book of Praises to the Holy Cross) circa the tenth or eleventh century; the Book of Hours of Charles V; the *Pedacio Discorides*, the first Spanish translation of one of the most important pharmacological treatises, printed in 1555; and *El Ingenioso Hidalgo don Quixote de la Mancha*, 1605, the *editio princeps*, or first edition, of the most famous work in Spanish literature. Of all the works displayed for us, one manuscript attracted my attention over all the rest: the handwritten notes of Bartolomé de Las Casas, used for his *Historia de la Indias* and based on Columbus' diary of the first voyage. This was my first encounter with the original of the more than 450-year-old manuscript, which I knew from modern editions only. I requested a photocopy of several pages, those covering December 22 to the 29th, 1492, which is the period during which Columbus' largest ship, the Nao Santa Maria, sank, a subject I am working on at the moment.

After an examination of those works, we were guided to the conservation lab of the National Library. It consisted of two large rooms, well lit, with many workbenches. It is obvious that conservation is performed there at the highest professional level, with modern techniques and materials. The work and the facilities are equivalent to what we have observed at the Library of Congress, the Folger Library, and the Etherington Conservation Center. We saw several

moulds for papermaking and a very large collection of finishing tools for bindings from all periods. One of the binders was gilding turn-ins on a recently restored book, while another one was restoring a tenth-century manuscript with some trepidation because she did not have a contemporary model and was following a model from the 11th century. At another table a conservator was removing the twentieth-century binding from a poorly rebound notebook from the fifteenth century. The notebook had to be properly rebound in a contemporary binding in consonance with its extraordinary value—it was nothing less than the treatise *De Estatica y Mechanica* by Leonardo Davinci, written in 1493.



Detail of restoration work to a tenth-century manuscript in the conservation lab of the Biblioteca Nacional.

EL MUSEO MARÍTIMO DE MADRID (MARITIME MUSEUM OF MADRID)

The next stop on our pilgrimage was the Maritime Museum of Madrid, which dates to 1792, when a naval officer was commissioned to visit England and France to acquire books, maps, and other related items. The collection was expanded when one of the foremost nineteenth-century historians, Fernandez de Navarrete, set up a committee of researchers to examine archives throughout Spain in search of manuscripts and documents related to the Spanish navy and the country's relationship with the sea. Through copying these documents, the museum amassed a tremendous collection of forty bound volumes. The museum was finally inaugurated in 1843 by Queen Isabel II. After two major relocations, the institution was transferred to its present location in 1932.

The Maritime Museum's holdings encompass a large number of ship models and replicas of ships

throughout history, a collection of plastic and decorative arts, weapons, medals, and nautical and scientific instruments. Its most valuable treasure is the *Mappa Mundi* by Juan de la Cosa, done in 1500. The chart is a map of the world known to the Europeans at that time, and it includes the oldest representation of the New World. Of special interest is the outline of Cuba, which Columbus did not accept to be an island. The map consists of two vellum or parchment panels. Europe, Africa, and Asia are on one panel and the parts of the Americas reached by the Europeans, on the other. The two panels are drawn to different scales, with the Americas—a place name still unknown to Europeans—drawn on a larger scale. Rhumb lines and compass roses give the impression of a Portolano chart. The maker of the map, Juan de la Cosa, was a Spanish sea captain who sailed with Columbus on his first three voyages and later sailed to America as pilot on other expeditions. This chart had been lost for centuries until 1832, when it was discovered in Paris by Baron Walckenae, a bibliophile and Dutch ambassador to France. Alexander von Humboldt, scientist and explorer, made it public in 1853, after which it was purchased by the Queen of Spain.

LA REAL ACADEMIA DE LA HISTORIA (ROYAL ACADEMY OF HISTORY)

The Real Academia de la Historia was founded on April 18, 1738, by royal decree of Phillip V. The Academy statutes describe its objective as portraying “the important truth of events, rejecting fables created by ignorance or by malice, forging knowledge of many things which occurred in antiquity or which have been buried due to carelessness.” It is further established that its goal is “to purify and cleanse Spain from fables which tarnish it and promote the news which seem more auspicious.” The Academy's philosophy of austerity is reflected in the architecture of the 1788 building that houses the institution: a simple brick structure with stone trimmings. The great Spanish intellectual and bibliophile, Marcelino Meléndez Pelayo, became the director in 1898, living there until his death in 1912.

At the Academy we were greeted by the chief librarian, Dr. Quintin Aldea Baquero, who made a brief presentation on the history of the Academy and led us on a tour of the facilities and an exhibit of some of its treasures, including the *Glosas Emilianenses*,

catalogued as *Aemilianensis* 60, a collection of homilies and other religious texts from the ninth century. The marginal notes of this codex contain some of the first documented scripts of writing in the Castilian and Basque languages. Other holdings included a *Glosarium Latinum*, Codex 31 from the eleventh century, and a second *Glosarium Latinum* catalogued as Codex 46, from the tenth century. The peculiarity of the second copy is that it is dated. Another extraordinary item was a copy of Claudio Ptolomy's *Cosmographia*, the Roman edition of 1478. This particular book belonged to Christopher Columbus. Also on display were the Complutense Polyglot Bible printed in 1514-1517; a letter from Columbus to Juan Luis de Mayo in 1504; the original manuscript of the *Historia general de las Indias* by Fernandez de Oviedo, one of the most important chronicles of the sixteenth century; and other extraordinary rarities.



Glosas Emilianenses. Manuscript 60 of the Royal Academy of History, one of the oldest manuscripts maintained in the institution. It dates to the ninth century, with additions written in the tenth and eleventh century. The work is a collection of commentaries written in gothic script, believed by some experts to be a guide in the learning of Latin.

The library of the Royal Academy of History is probably the best there is for the study of the history of Spain and Spanish America. In addition to its printed books and periodicals, it has manuscripts and codices going back to the Middle Ages. Its collection has about 400,000 volumes, including 200 incunabula. The donation of a private library specializing in medieval history added some 30,000 volumes to its collection. It is through donations like this one, mostly from members of the Academy, that its holdings have grown in number. Another extraordinary



The Complutense Polyglot Bible, held by the library of the Royal Academy of History, is the first polyglot Bible. The printing took place between 1515 and 1517, financed by Cardinal Jiménez de Cisneros (1436-1517). It includes the first printed edition of the Greek New Testament, the complete Septuagint and the Targum On Kelos. Of the 600 printed only 123 are known to survive to date. It is considered by some a monument to the eternal glory of Spain.

collection in scope and quality came from the documents compiled during the early 1800s by the renowned historian, Juan Bautista Muñoz. These papers are essential to the study of Spanish America.

LA REAL ACADEMIA DE BELLAS ARTES DE SAN FERNANDO (ROYAL ACADEMY OF FINE ARTS OF SAN FERNANDO)

Other collections of great value that we were privileged to view were those kept at the Real Academia de Bellas Artes de San Fernando, located in the heart of Madrid and established in 1744 as an academy of art. It was modeled after the Rome, Paris, Flanders, and Florence academies of art. The Academy is home to a museum and a gallery housing a fine art collection from the fifteenth to the twentieth century, including works by Bellini, Corregio, Rubens, Zurbarán, Murillo, Goya, and many others. It is the headquarters for the Madrid Academy of Art. Its directors have included Francisco Goya, and its students Pablo Picasso and Salvador Dalí. Our main interest lay in its books and other documents, which comprise a collection of 40,000 volumes.

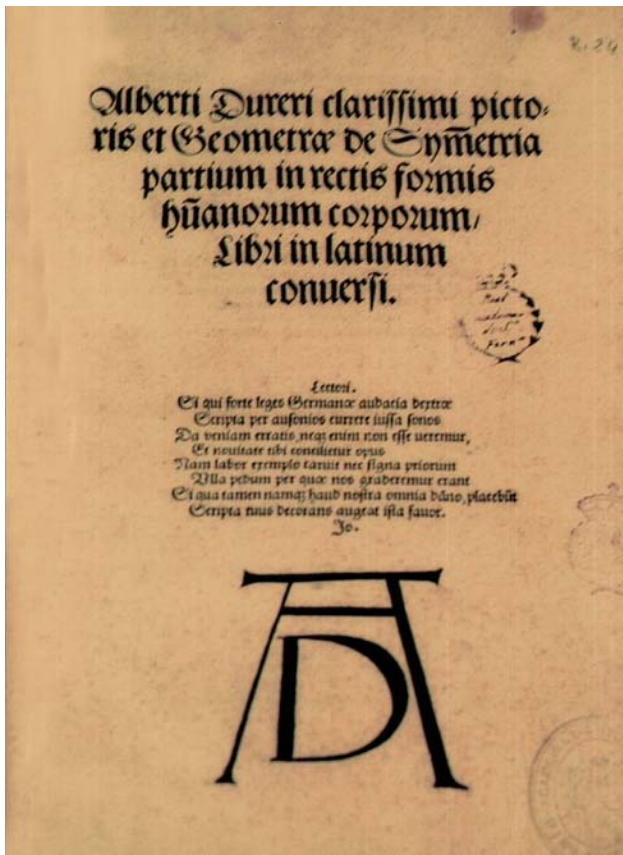
A display was prepared for us, which included manuscripts on works by Goya and Durer; a demonstration on how copper plates for book engravings were prepared; an eighteenth-century translation of Vitruvius' work on architecture, which was placed next to the original Vitruvius printed in Venice in 1535; and an eighteenth-century manual for learning how to draw. But most fascinating were the original librettos or scores of nineteenth-century *zarzuelas*, a musical genre of light opera typical of Spanish musical tradition and noted for its musical complexity and the musical and dramatic training it requires. (Spanish opera singer Plácido Domingo has contributed greatly to promoting the genre in the United States.) Among the original *zarzuela* musical scores shown were those of *Luisa Fernanda*, *Los Gavilanes*, and *La Gran Vía*, some of the best known and most popular since their original staging. The scores had original annotations made in the composers' own hands. We were fortunate in examining all of the materials because its library, like many others in Europe,

is restricted to professional researchers and seldom opened to the public.

LA REAL BIBLIOTECA DE MADRID (ROYAL LIBRARY OF MADRID)

The last of the inspiring institutions in Madrid that we had time to visit was the library in the Royal Palace, another great repository of books and book-binding holdings. The Royal Library (also referred to as The Palace Library or La Biblioteca de Palacio) originated as the Private Library housed at the palace of the monarchs of the House of Bourbon. It was referred to as the Royal Private Library or Chamber's Library. It is a distinct and separate institution from the Royal Public Library, although both institutions had a common origin until they were officially separated in 1836 when the Royal Public Library was transferred to the Spanish State, becoming the Biblioteca Nacional. The Royal Library had its beginnings in eight thousand books collected by Phillip IV (1605-1665). When Phillip V (1683-1746), the first Bourbon king, ascended to the Spanish throne in 1700, he added a number of books to the collection that he brought in from France and with them established the Royal Public Library, the nucleus of what later became the Biblioteca Nacional. The palace was nearly devoid of books until Charles III ascended the throne. In 1763 a catalogue was prepared, which did not show much of a collection but represented a ruler's working library: history, law, religion, horses, and warfare. It was not until the nineteenth century that the holdings were built up and most of the library's 250,000 printed books, 5,000 manuscripts, 250 incunabula, 2,000 musical scores, and 1,500 maps were acquired.

Some of these beauties were removed from their locked glass-fronted cases for our examination: a Book of Hours written and richly illuminated in Paris circa 1460 for Queen Juana Enriquez of Aragón, the mother of King Ferdinand the Catholic; the manuscript of Sahagún's history of New Spain circa 1577, not printed until 1829; a St. Augustine *City of God* printed by Jenson (Venice, 1475); a pattern book for tailors printed in Valencia 1618, a work of great rarity; and a *Libro de Monteria*, a late fifteenth-century treatise on hunting. Most significant in the library was its collection of historical bindings, among the best in the world. The library is working on a project to exhibit its holdings of bookbindings online. In an



Durer's *Clarissimus Pictoris et Geometriae de Symmetria Partium Homanorum in Rectis Formis*. This work was originally printed in Nuremberg in 1532.

effort to promote fine binding and enlarge the collection, Queen Sofia, the present queen, sponsors a binding competition every year, and the winning entry is added to the holdings.

TOLEDO

Toledo, one of the principal cities in the world for several centuries, was the seat of government for the Catholic monarchs Ferdinand and Isabella, and Emperor Charles V (1500-1558). It lost its primacy when Phillip II moved the capital of the Spanish empire to Madrid in 1561. Toledo diminished in importance but not in splendor, and it still captivates the visitor, especially through its architecture. Walking on the streets of Toledo, with structures dating from the different centuries of its past, is like walking through history. The city dates back to the eighth century with the remaining structure of the Galeana palace, built by Galafre, the Arab governor of Toledo. In its garden there was once a water clock, which was taken apart during the reign of Alphonse VI in the tenth century to be examined, and its mechanism copied. As usually happens in such cases, the clock was damaged beyond repair and no copies were ever made. The cathedral of the city is one of its most outstanding monuments, one of the most important cathedrals in Spain and one of the most magnificent gothic temples in all of Europe. It was founded in 1227 and took more than 200 years to be completed. The Alcázar, built by Charles V in the sixteenth century, is another extraordinary structure; it has been nearly destroyed on more than one occasion. At present, it is undergoing full restoration to its original splendor. There is also Santa Cruz Hospital, today an art museum featuring Spanish art from the sixteenth and seventeenth centuries.

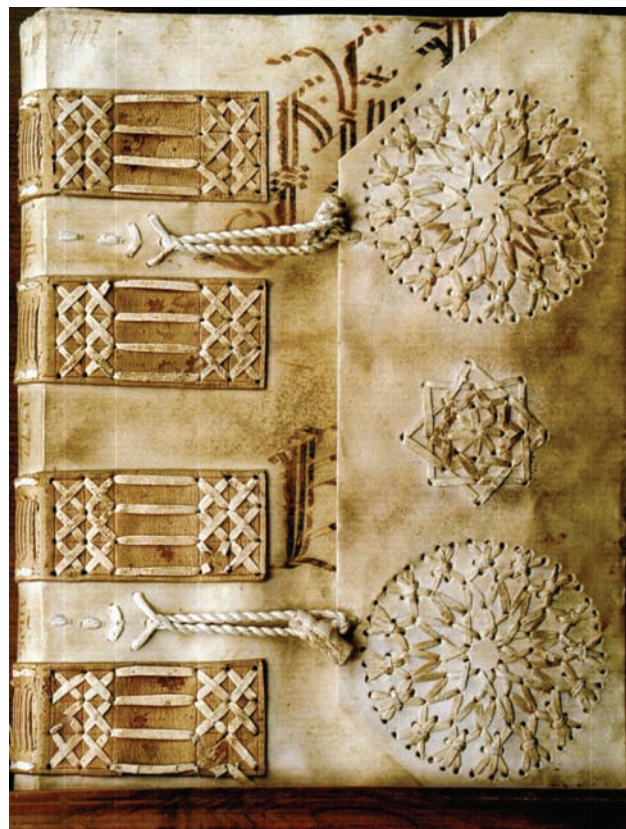
EL HOSPITAL DE TAVERA (THE TAVERA HOSPITAL)

Another former hospital, this one built outside the city walls in 1541 (and so designated the “outside hospital”), is the Hospital de Tavera in Toledo. During the seventeenth century it lost its primary function when it was converted into a sumptuous residence for the Duke of Lerma. At present, it is a museum with a rich collection of tapestries and art works. Our main interest, however, was its library. Its holdings are limited to several sixteenth-century elephant folios in

exuberant bindings. Most striking, indeed, is the collection of four or five hundred volumes of the administrative books of the hospital, all parchment-bound in the Gothic-Mudéjar style of the sixteenth century, with its envelope or flap cover. The decorations are full of arabesques, star-like and geometric forms, all made from thin leather strips with designs highlighting a central knot. The other interesting aspect of this building is the section dedicated to the Medinaceli family archives, a rare cache of manuscripts and documents dating back to the fourteenth century, essential to the history of Spain.

EL ARCHIVO DEL CONDE DE ORGAZ EN AVILA (CONDE DE ORGAZ ARCHIVE IN AVILA)

Our next visit was the walled city of Avila, the birthplace of Saint Teresa of Avila, born in 1515. She is one of the great mystics of the Catholic Church. The Conde de Orgaz’s country home in this city was the abode of Saint Teresa when she was born. The archive is located in the annex to the home, which is full of very large folio and vellum bound books from



Fifteenth-century account book of the Hospital de Tavera beautifully bound in the mudéjar-gothic style depicting a strong Moorish influence.

the sixteenth century. Most of its manuscripts and documents date back at least five centuries, many of them bearing terracotta or bronze seals which were required to make royal charters and decrees official. The archive is opened to researchers, who are required to assist in the cataloguing and who use it as a tool in the study of nobility that was very powerful, ruling over wide spans of territory, with national and international commercial interests, sometimes outshining those of their own monarch. The documentary richness of this type of archive is essential for the study of the economic and social history of the nobility and the power and influence it exerted in the country.



A section of the family archive of the Conde de Orgaz depicting unbound manuscripts and rolls of parchment documents pending cataloguing.

EL REAL MONASTERIO DE EL ESCORIAL (ROYAL MONASTERY OF EL ESCORIAL)
The last station in our pilgrimage was the library of the Royal Monastery of El Escorial, Phillip II's imposing palace at the foothills of the Sierra de Guadarrama, in the town of San Lorenzo, some forty miles northwest of Madrid. It was built between 1563 and 1584 in honor of San Lorenzo, or St. Lawrence, to commemorate the victory over the French in the Battle of San Quentin, southwest of Paris. The unornamented severity of the structure established a new architectural style, which became one of the most influential in Spain. The interior of the building included a mausoleum and a space for contemplative retreat rather than an ostentatious residence. The royal apartments are extremely humble. Its artistic wealth, on the other hand, includes some of the most

important works of art of the royal Hapsburg collections. Phillip II's chaplain presented a memorial

The Escorial is the only library that, out of respect for its founder, has never altered the custom of shelving its books fore edge outwards.

to the king urging him to set up a public library: "It is no small advantage to have a possession which ennobles the nation and persuades the principal scholars of the world to visit us" (Hobson 1970). The proposal for the library was on the lines of Fontainebleau, Florence and Venice. Phillip II accepted the need for a library, but his interest in learning was more toward the religious than the secular. He

drew inspiration from the role of abbeys of the Middle Ages as centers of learning, so he deposited the custodianship of the library on the Order of Hieronymite monks. Unfortunately, they were not known for their scholarly tradition.

The library was slow in developing and acquiring its holdings. Its magnificence at the beginning was the great hall with its vaulted ceilings covered with exquisite frescoes, its marble floors, and its beautifully carved bookcases, which were filled with an impressive array of books, most of which are bound in parchment. The library rooms are decorated with portraits, globes, astrolabes, and mathematical instruments. From the library's beginnings, its books stood with the fore edge outwards. This practice was common in the sixteenth century, but the Escorial is the only library that, out of respect for its founder, has never altered the custom. The collection, which had grown throughout the years, suffered badly in a 1671 fire that destroyed nearly 4,000 codices, including 2,000 Arabic manuscripts. But the library still has an extremely rich collection, which includes Arab, Greek, and Hebrew manuscripts. In 1885 the library was handed over to the Augustinian Order, and its modernization and expansion was revitalized (Hobson 1970).

After the tour of the residential quarters and the great hall, we were escorted to a study room, where some of the treasures had been removed from the vault for our private viewing. Here we viewed Alphonse X's *Cantigas de Santa Maria* written in Galician; a masterpiece of thirteenth-century

Castilian illumination and Alphonse's book on chess; the gold-scrolled *Aureus Codex* (1039); an eleventh century *Commentary on the Apocalypse* by Beato de Liébano; the *Breviary* of the Catholic monarchs; and Santa Teresa's manuscript and diary, among others. The director of the Library urged our local guide to remember these works well because she would probably not view them again during her lifetime. With this visit we concluded our pilgrimage.

KEEPING THE FAITH

It is seldom possible to have such a bountiful and magnificent experience, viewing and handling manuscripts and books that are treasures. It is an opportunity to live through history with objects of rare beauty, each of which encapsulates a moment whose philosophy, culture, beliefs, concerns, opinions, music and sometimes even falsehoods are revealed to us through its authors and scribes. Books are real-life connections between the writers and their readers, irrespective of time or space. Books warp the essence of time by allowing their readers to recede to the moment of their creation and share a sense of their moment in history. On this occasion, we did just that: we reconnected with some of the great minds of long-gone centuries, who transcended barriers of time, space and culture. The trip was a reaffirmation of Spain's abiding importance within the scope of Western tradition, as shown in its treasure troves of books, manuscripts and bookbindings.

REFERENCES

Campos Payo, Juan. 2002. *Esto es Toledo: Historia, Monumentos y Leyendas*. Toledo: Artes Gráficas Toledo, S.A.

Candel, Miguel. 1995. "La Escuela de Toledo y la Filosofía." *Puntoycoma, Boletín de los traductores españoles de las instituciones de la Unión Europea*. Num. 36 (Oct.).

De Casanova y Todolí, J. 2006. *Salamanca: Biografía de una ciudad*. 3ra edición. Salamanca: Amaurú Ediciones.

El Medkouri Maatroni, Mohammed. Julio, 2006. "Escuelas y técnicas de traducción en la Edad Media." *TONOS, Revista Electrónica de Estudios Filológicos* XI: 183-187.

Flórez Miguel, Cirilo. 2001. *La fachada de la Universidad*

de Salamanca: Interpretación. Salamanca: Ediciones Universidad de Salamanca.

Hitti, Phillip. 1964. *History of the Arabs*. London: McMillan & Co., Ltd.

Hobson, Anthony. 1970. *Great Libraries*. New York: G.P. Putnam's Sons.

Martínez Frías, José M. 2006. *El cielo de Salamanca*. Salamanca: Ediciones Universidad de Salamanca.

Rodríguez San Pedro Bezares, Luis E. 2004. *Bosquejo histórico de la Universidad de Salamanca*. Salamanca: Ediciones Universidad de Salamanca.

Salloun, Habeek. 1997. "Ibn Rushd: The Great Muslim Philosopher who Planted the Seed of European Renaissance." *Aljudid: A Review of Records of Arab Culture and Arts*. 3:19 (June).

Seneca, Lucius A. 1997. *Dialogues and Letters*. London: Penguin Classics.

Thomas, Diana M. 1984. *The Royal Company of Printers and Booksellers of Spain 1763-1794*. Troy, New York: The Whitston Publishing Co.

Vennet, Juan. 1999. *Lo que Europa debe al Islam*. Barcelona: Editorial El Acantilado.

RECOMMENDED ADDITIONAL READINGS

Abad, Julián Martín, ed. 1997. *La Ilustración del Libro Antiguo en España*. Madrid: Ollero & Ramos, Editores, S. L.

Almago-Gorbea, Martín, ed. 2000. *Tesoros de la Real Academia de la Historia*. Madrid: Real Academia de la Historia.

Baker, Colin. 2007. *Qu'ran Manuscripts: Calligraphy, Illumination, Design*. London: The British Library.

Castillo Gómez, Antonio, ed. 2003. *Libros y Lectores en la Península Ibérica y América*. Salamanca.

Checa-Cremades, José L. 2008. *Los Estilos de Encuadernación, siglo III d.J.C.-siglo XIX*. Madrid: Ollero & Ramos, Editores, S. L.

Crouzet, Pierrette, ed. 2002. *L'Art du Livre Arabe*. Paris: Bibliothèque Nationale de France.

Díaz, José Simón. 2000. *El Libro Español Antiguo*. Madrid: Ollero & Ramos, Editores, S. L.

Esdaile, Arundell. 1948. *The British Museum Library*. London: George Allen & Unwin Ltd.

Febvre, Lucien and Martin, Henri-Jean. 1962. *La Aparición del Libro*. México, D.F.: Fondo de Cultura Económica.

Fernandez del Castillo, Francisco, ed. 1982. *Libros y Libreros en el siglo XVI*. México, D.F.: Fondo de Cultura Económica.

Habler, Konrad. 1897. *The Early Printers of Spain and Portugal*. London: The Bibliographical Society at the Chaswick Press.

Hobson, Anthony. 1999. *Renaissance Book Collecting*. Cambridge: Cambridge University Press.

Hueso-Rolland, Francisco. 1934. *Exposición de Encuadernaciones Españolas, siglo XII al XIX*. Madrid: Nuñez de Balboa.

Johnson, Elmer. 1965. *A History of Libraries in the Western World*. New York & London: The Scarecrow Press.

Lyell, James. 1926. *Early Illustration in Spain*. London: Grafton & Co.

Martínez Montalvo, Pedro, and Ruiz Bravo, Carmen. 1991. *Europa Islámica*. Milano: Annaya Editoriale s.r.l.

Norton, Frederick. 1961. *Printing in Spain: 1501-1520*. Cambridge: Cambridge University Press.

Thomas, Henry. 1939. *Early Spanish Bookbindings*. Oxford: Bibliographical Society.

MITTWOCH: GESPRÄCH VOM PAPPBAND.

BÜCHERFREUND (kommt mit Büchern unter beiden Armen): Meister, hier bringe ich einige meiner Bücher. Besonders am Herzen liegt mir eines, die Gedichte eines unserer Jüngsten. Es ist ein ungewöhnliches, himmelstürmendes Buch, in dem aber auch zarte schwermütige Töne angeschlagen werden. Ich habe mir nun dafür unter Ihren Buntpapieren eines ausgesucht, dessen Untergrund ein wunderbar feines Farbenspiel ist, dessen Muster aber seltsam aufgeregt und bewegt ist.

MEISTER: Aber Sie haben ja das Buch schon gelesen!

BÜCHERFREUND: Darf ich das denn nicht? Was hat mein Lesen mit dem Einbinden zu tun?

MEISTER: Sie mußten das Buch dazu aufschneiden, und dadurch macht es mir mehr Mühe beim Einbinden. Auch kann ich Bogen, die vielleicht nicht gut gefalzt sind, jetzt nicht mehr im Ganzen nachfalzen.

BÜCHERFREUND: Ich danke Ihnen für die Lehre und will mir merken, daß ein echter Bücherfreund seine Bücher erst liest, wenn sie gebunden sind. Bevor wir aber vom Einband sprechen, noch eins: Der Dichter hat mir eine eigenhändige Widmung in dies Exemplar geschrieben und zwar so, daß seine Schrift bis dicht an den vordersten Rand des Blattes geht. Wenn Sie nun das Buch beschneiden, dann schneiden Sie mir ja kein Stück von der Widmung ab.

MEISTER: Da weiß ich mir Rat. Wie Sie sehen, steht die Widmung nur im rechten Teil des Blattes, der linke, der vom Bogenrücken ausgeht, ist aber freigeblieben. Davon schneide ich einen Streifen so weit ab, daß das Blatt

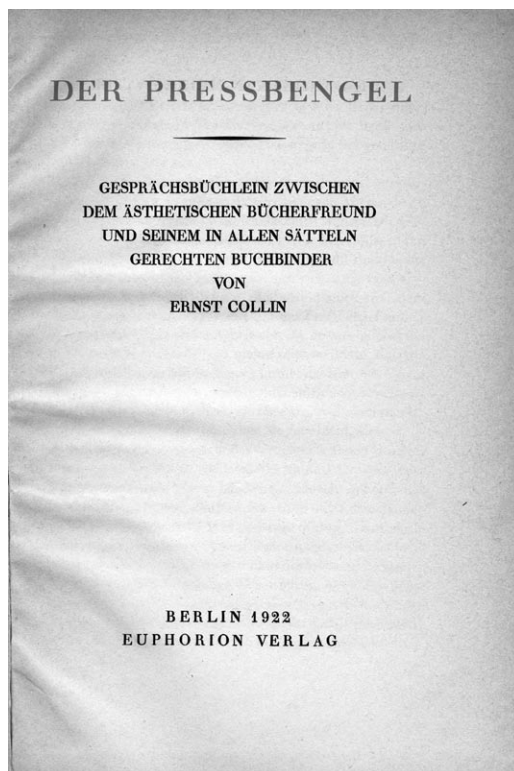
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beim Beschneiden nicht aufgetroffen wird. Das machen wir immer, auch bei Bildern, die größer sind als der Satzspiegel. Geht die Widmung aber über die ganze Breite des Blattes, dann kann man sich nicht anders helfen, als daß man es vorn ein wenig umlegt. Sie wollen also einen Pappband für dies Buch haben?

BÜCHERFREUND: Es muß aber ein solider Einband sein. Ich habe mir früher Bücher in Pappband gekauft, mit denen ich keine guten Erfahrungen gemacht habe.

MEISTER: Dann kann es sich nur um Maschineneinbände gehandelt haben. Sie werden ja von einem Handwerksmeister voraussetzen, daß er für Maschinenarbeit nicht viel übrig hat. Aber ich bin mir wohl der Bedeutung des Maschineneinbandes bewußt, der allein die große Masse der Leser instandsetzt, gebundene Bücher zu kaufen. Trotzdem ist es kein Konkurrenzneid, wenn ich sage, daß ein mit der Maschine hergestellter Einband niemals die Güte eines erreichen wird, den die Arbeit der Hand schuf. Ganz abgesehen davon, daß oft das Falzen der Bogen und immer die Hefung der Maschineneinbände maschinell ausgeführt ist, besteht der wesentliche Unterschied zwischen Maschinen- und Handeinband darin, daß bei dem ersteren Buchblock und Einbanddecke zwei völlig verschiedene Dinge sind; die fertige Decke wird in den fertigen Buchblock geklebt. Beim handgebundenen Buche sind aber beide gewissermaßen miteinander verwachsen, die Verbindung ist eine innige. Denken Sie bitte daran, daß ich am Montag dabei stehen geblieben bin, wie nach dem Anbringen des Schnitts die Pappen zugeschnitten werden. Um jetzt die rohen Pappdeckel vollständig mit dem Buch

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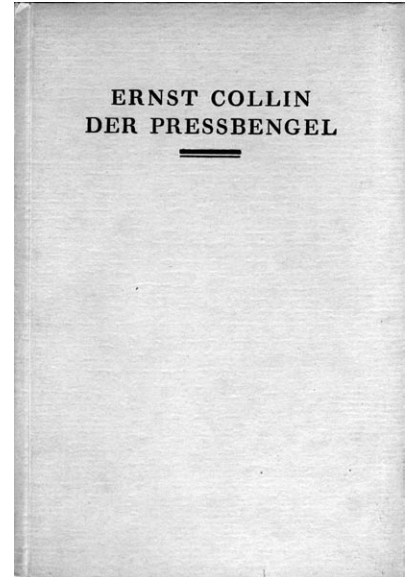


Cover (opposite), title page, and text pages of *Der Pressbengel*.

DER PRESSBENGEL THE BONE FOLDER

A Dialogue Between an Aesthetically Inclined Bibliophile and a Well-Versed-in-All-Aspects-of-the-Craft Bookbinder, by Ernst Collin. Originally published as Der Pressbengel by the Euphorion Verlag, Berlin, 1922. Translation © 2010 by Peter D. Verheyen.

ERNST COLLIN (1886-1954) WAS a writer whose father, the well known Berlin-based bookbinder Georg Collin (1851-1914), occasionally provided bookbinding lessons to the Prussian King and German Emperor Frederick III. The elder Collin was also very involved in training women to become full-fledged bookbinders.¹ Because of this paternal connection with the trade, Ernst maintained a strong affinity for bookbinding, demonstrated by his publications about and for the bookbinding trade. Among them are *Vom guten Geschmack und von der Kunstbuchbinderei* (1914), a treatise about aesthetics and fine binding included in a monograph about the Spamersche Buchbinderei, Leipzig; *Deutsche Einbandkunst* (1921), the catalog to the Jakob Krause Bund's exhibition; and the Bund's newsletter, *Die Heftlade* (1922-24). The Jakob-Krause-Bund, a precursor to Meister der Einbandkunst (MDE, the German association of masters of the art of binding), included some of the most influential German binders of the late 19th and early 20th century, among them Paul Adam, Otto Dorfner, Paul Kersten, and Franz Weiße. Collin also authored *Buchbinderei für den Hausbedarf* ([1915]) and *Paul Kersten* (1925), the latter a biography of one of the most seminal German fine bookbinders, whose *Der Exakte Bucheinband* (1923) helped define German fine binding. *Der Pressbengel* (1922), Collin's best-known work, was first republished in 1984 by the Mandragora Verlag and later translated into Italian as *Dal Religatore d'Arte* (1996). Conceived as a dialogue between a bibliophile and a master bookbinder on all aspects of the bookbinding craft as well as specific techniques, the original German has a charming if somewhat pedantically formal "school primer" tone, in keeping with the time in which it was written. The question-and-answer format has long history in pedagogical texts, whether for catechisms (see Nicolaus Cusanus' *Christliche Zuchtschul*) or trades, as in Friedrich Friese's *Ceremoniel der Buchbinder* (1712), which introduces the reader to all aspects of the bookbinding trade and its traditions. First published in 1937, Oldrich Menhart's *Evening Conversations of the Book-lover Rubricius and the Printer Tympanus* is the letterpress equivalent to Collin's *Pressbengel*, and there is considerable overlap between the two, as might be expected. *Evening Conversations* was later translated into



Peter D. Verheyen received his start in the book arts as a work-study student in the conservation lab at the Johns Hopkins University Library. Following a formal apprenticeship in hand bookbinding, he worked as a binder and conservator, and is currently head of preservation and conservation at Syracuse University Library. His teaching and publishing interests are focused on the German style of binding. His bindings have been exhibited widely throughout the USA and abroad. Peter is the founder of Book_Arts-L, the Book Arts Web, and is publisher of The Bonefolder at www.philobiblon.com.

German (1958) and then English (1980), the latter by the Crabgrass Press in an edition of 100 copies bound by Fritz Eberhardt

Throughout the work, Collin himself is very frank in addressing the conflicts between quality and cost, as well as the positive and negative impacts of “machines” throughout the work. In his introduction to the 1984 reprint of *Der Pressbengel*, Gustav Moessner, author of and contributor to several German bookbinding texts, states that he sees the Collin’s work in part as a reaction to the growing industrialization of the bookbinding trade and the loss of the skills and techniques connected with this industrialization. In many respects this trajectory continues today, accelerated by the decrease in formal bookbinding apprenticeship opportunities, the increasing simplification of structures, changing aesthetics, and ultimately changes in the perceived value of books and the general economic climate. Until recently, Germany’s strong guild system required one to complete a formal apprenticeship and become a master binder to order to open one’s own shop and train apprentices. Unfortunately, this system has been in decline over the past decades, and many shops are closing or no longer training apprentices—a completed apprenticeship and “meister” are no longer required to open a business if no apprentices are being trained. Concurrently, a network of centers and alternative programs, such as “master-run” shops offering instruction to amateurs, is not developing in a way that would provide the high quality, rigid training critical to sustaining the craft over the long term. The apprenticeship system declined even earlier in the United Kingdom, another nation with a strong tradition of formal craft training. In other countries the trade system was not as formalized to begin with. The United States represents the most diverse environment for the trade, with a blending of the dominant English, French, and German traditions brought over by immigrants, but a formal career path, like that in the European tradition, never developed. Instead, less formal apprenticeships (on-the-job training) became the norm. This did not, however, hinder the development of some very fine American binders.

Samuel Ellenport’s *The Future of Hand-Bookbinding* (1993) provides an excellent if sobering overview of the changes experienced by the hand bookbinding trade in the United States, but leaves out the explosive

growth among amateur binders and book artists. The past thirty years have seen a resurgence of interest in all aspects of the book arts, with centers offering workshops springing up across the United States.

Formal programs have been developed, including the North Bennett Street School in Boston (a two-year trade model), the American Academy of Bookbinding

in Colorado (a series of workshops), and the University of Alabama’s MFA in the book arts (an academic degree). These programs are doing much to preserve many traditional skills, but the contemporary book arts craft risks losing others that may be deemed too anachronistic or, like gold tooling, simply unaffordable and therefore not regularly practiced.

**Collin’s work
is in part a
reaction to
the growing
industrialization
of the
bookbinding
trade**

This is the first publication of *Der Pressbengel* in English, and while I have attempted to remain faithful to the original text, it should not be considered a scholarly translation. It is intended, like the German original of 1922, to be a general introduction to the bookbinding craft and trade as it existed in Germany when the work appeared. While techniques are described in varying level of detail, it was never intended to be a “technical manual.” The title change from *Der Pressbengel*, an esoteric tool used to increase the leverage when tightening a German backing press (Klotzpresse), to *The Bone Folder*, an iconic tool that represents bookbinding as no other can, was undertaken both because “Pressbengel” has no “clean” English equivalent and to help make the text more accessible to today’s binders and bibliophiles.² In a very few other cases, references to brand names have been made more general where this had no impact on the essence of the text. The result, I hope, is in keeping with the spirit and essence of the original German.

NOTES

1. Information from the website of the **Verein Berliner Buchbindermeister 1849 e.V. (Association of Master Bookbinders in Berlin)**. < <http://www.vbbm1849.de>>, Geschichte.

2. This change has also been made in the first paragraph of the Tuesday section of the dialogue and in the last line of the text.

REFERENCES

Collin, Ernst. [1915] *Buchbinderei für den Hausbedarf*. Leipzig: Hachmeister & Thal.

_____. (pub.) 1922-1924. *Die Heftlade: Zeitschrift für die Förderer des Jakob-Krause-Bundes*. Berlin: Euphorion-Verlag. (Serial, 24 issues total)

_____. 1925 *Paul Kersten*. Berlin: Corvinus-Antiquariat E. Collin.

_____. 1922 *Der Pressbengel*. Berlin: Euphorion Verlag.

_____. 1984 *Der Pressbengel*. Munich: Mandragora Verlag.

_____. 1996 *Dal Religatore d'Arte*. Mendrisio : J. Weiss.

_____. 1914 *Vom guten Geschmack und von der Kunstbuchbinderei*. Essay included in *Spamersche Buchbinderei, Leipzig: Werkstatt für handgebundene Kunsteinbände*, Ernst Collin, ed. N.p. (Printed: Leipzig: Spamer.)

_____. (pub.). 1921. *Deutsche Einbandkunst: Ausstellung d. Jakob Krauß-Bundes ; Vereinigung deutscher Kunstbuchbinder im Weißen Saal d. Schloßmuseums zu Berlin ; Sept.-Okt. 1921*. Berlin-Steglitz: Ernst Collin.

Cusanus, Nicolaus. 1656. *Christliche Zuchtschul*. Jetzt zum andern Mahl auff's new vbersehen, vnd getruckt mit einem nützlichen Zusatz [...]. Cölln [Cologne]: In Verlag Ioannis Kinchii Buchhändlers.

Ellenport, Sam. 1993. *The Future of Hand Bookbinding*. Boston: The Harcourt Bindery. (E-version available at <<http://www.philobiblon.com/FutureOfHandBookbinding.shtml>>)

Frisius, Friedrich. 1712. *Ceremoniel der Buchbinder*. Leipzig : n.p., 1712. (This work was reprinted in a facsimile edition – Hannover: Edition “libri rari” Th. Schäfer, 1985.)

Kersten, Paul. 1923. *Der Exakte Bucheinband*. Halle (Saale): W. Knapp.

Menhart, Oldrich. 1980. *Evening Conversations of the Booklover Rubricius and the Printer Tympanus*. Prairie Village, Kan.: Crabgrass Press.

DER PRESSBENGEL/THE BONE FOLDER

MONDAY: A DISCUSSION ABOUT BOOKBINDING

BIBLIOPHILE (looking around the studio of the master bookbinder): Master, what is this wonderful tool that you have here? It looks intriguingly dangerous. BOOKBINDER: That, my good sir, is a harmless but important tool. We call it a bone folder. I use it to fold paper, make signatures, rub down the linings on the spine, and work leather and any number of other materials that I encounter every day. With it I can take a collection of papers and craft them into a book. It is an extension of my hands and serves as a continual reminder of the value of good craft work, even if aura of the trade is no longer what it once was.

BIBLIOPHILE: Quite right, Master. As a bibliophile I know how to value a finely handbound book. I just can't find pleasure in reading an ugly, poorly bound book that falls apart as one is reading it. In contrast a well bound, indestructible book helps bring me to the time and place of the story and gives me the sensations I need when reading. If I were to ask you, Master, could you tell me about your work? Please don't think idle curiosity is my motive or even that I want steal ideas from you.

I think I will be a better client if I understand your craft and can judge its complexity. My opinion is that a bibliophile who doesn't understand books is following a trivial pursuit. However, someone who isn't interested only in the content of the work but also understands how a book is made—beginning with papermaking and through to titling the finished binding—has embraced book collecting with his heart and soul. So, won't you introduce me to the secrets of your craft in a few short discussions?] BOOKBINDER: I would be willing to do that, but you can't expect me to teach you everything, as that would require an apprenticeship of three to four years, plus

as many more years of work and experience in order to become a competent master bookbinder. A master binder doesn't appear out of nowhere. Why don't we do it this way: I'll tell you about some of the most important binding styles first, and tell you only enough about the structure so you can visualize it. We'll talk about the specific details that interest you when you bring me your books to bind.

BIBLIOPHILE: That sounds fair. So, master, why don't you start?

BOOKBINDER: All right, let's start with the paper case binding, whose covering is made of paper, either plain or decorated. We'll talk about it again later because it is the most beautiful of the simple bindings, and you will certainly have me make many of them for you.

Next is the quarter cloth binding, in which the spine and the corners of the book's cover are in colored book cloth. Book cloth is woven from cotton, and we can get it in many attractive textures and colors. The parts of the book not in cloth are covered with plain or decorated paper. These are simple bindings, and I want to emphasize that this style is not as much for the bibliophile as for heavily used items in public libraries.

And now we come to the first of the finer bindings, the quarter leather binding. What on the quarter cloth binding would be fabric is now covered in leather. It is a finer binding because leather is the most noble of covering materials. Also, the structure as a whole is much more involved.

BIBLIOPHILE: I understand completely. If leather is the most beautiful and best material, then the binder is obligated to adjust all aspects of the books to the demands of that noble material. Noblesse oblige!

BOOKBINDER: Exactly, and finally we have the best binding structure, the full leather binding. As the name suggests, the whole book is covered in leather. These are the main binding styles. We also have the quarter and full vellum bindings. You could cover books in silk or velvet as well, but that is not something that you as a bibliophile would want.

As you can imagine, the binding of a book is broken down into a sequence of many individual steps that build upon each other. When we are at the conclusion,

you will recognize that from the moment a binder takes a text block in his hand until the title is stamped on the spine—how should I say this—all these things occur in a logical sequence. Ultimately, if you miss just one stitch while sewing, it will all come apart.

Particular attention must be paid when preparing to sew. I don't want to bore you with the details, but I will say that we must first disbind books that have been sewn by machine. This includes breaking the book down to the individual signatures, removing the old thread (or, heaven forbid, those awful staples), and then scraping off the glue left on the outsides of the folds. Next, we need to put the signatures in a press in order to compact the text block. Before we do that, though, we may need to refold the signatures and collate them to make sure everything is there and where it should be. If there are plates, they will usually need to be trimmed to size and tipped back in or hinged in with a thin strip of paper or jaconette.

Disbinding includes removing the old thread (or, heaven forbid, those awful staples).

After the signatures have been in the press—like this one, which gets opened and closed using this iron bar—for a good long time, then we will make the endpapers. Endpapers are what we call the folios that come before and after the last signatures of the text block, made of a white- or cream-colored paper that is

matched in color and texture to the paper of the text block. There are many styles of endpapers, one of which I will describe for you. We'll start with a double folio of paper as tall as the text block and slightly wider. Applying paste in a very narrow bead to the back of the fold, we attach a five-centimeter-wide strip of paper that will serve as a reinforcing strip. When the paste is dry, we fold the strip around the back of the signature, just as pharmacists once used to attach the labels to medicine bottles. We place the endpapers on both sides of the text block so the strip of paper faces to the outside and put the book in a finishing press in order to determine how to divide the spine for sewing.

We sew over twine that we call cord. The old bookbinders used to place these cords on the outside of the spine, so they were raised and visible under the leather. Today we rarely sew on raised cords. The cords are recessed so as not to be visible, and if in the case of a

quarter or full leather binding we want raised cords, we will make false ones later out of strips of card.

BIBLIOPHILE: Master, if I may comment, aren't these false raised bands deceptive and a betrayal of good craft? They are certainly fake.

BOOKBINDER: We can debate the pros and cons of this argument for a long time. That said, in the end people just aren't willing to pay for the level of the craft that I love. If you know this kind of simplification need not be at the expense of sound structure, then I see no reason why one should abstain from the attractive appearance of raised cords on principle just because they aren't real. However, if the client wants real raised cords and is willing to pay, I am more than happy to oblige. But let us move on.

First, I need to divide the spine into fields to determine where the cords go. Usually we sew on five cords, and the fake raised cords are placed directly on top of these. With smaller or simpler books we'll reduce the number of cords to three or four. In addition to the cords we also have the kettle stitches, which are set back slightly from the head and tail of the spine—that is what we call the top and bottom of the text block. The sewing thread connects the signatures at the kettle stitch with a link stitch that looks like the links of a chain. Next, we saw into the folds of the signatures so that we can recess the cords.

BIBLIOPHILE: What? Saw into the text block? You're cutting into paper with a saw? Isn't that barbaric? Paper isn't wood! You're not a carpenter! Master, my bibliophilic conscience can't abide by that.

BOOKBINDER: Well, it's like this. I don't have a problem just lightly cutting in to the spine of the book, especially if one doesn't deepen the cut with a rasp as some do. One can also avoid sawing into the spine if one untwists the cords and flattens them so that they don't show when the leather is on the spine. If you wish, I'd be happy to sew your book on frayed-out cords if we aren't sewing on real raised cords, but it will cost more.

BIBLIOPHILE: I will gladly pay if it keeps the saw away from my books.

BOOKBINDER: We sew the book on a sewing frame, a tool that is almost as old as bookbinding itself. Here, take a look at my sewing frame—the board upon which the signatures are laid during sewing. At the front are threaded wooden dowels that go through a cross bar, which is slit for the hooks that will hold the

cords taut during sewing. Below that, in the board, are nails to which the cord is attached. Sewing is a very important step. You start with the last signature (the back endpaper) and insert the threaded needle through the fold at the kettle stitch, come out and over the first cord, then back into the signature, then out and over the next cord, until you get to the other kettle stitch. Then the next signature is placed on top and we repeat the process, always remembering to connect the signatures. After we are done, we cut the

We sew the book on a sewing frame, a tool that is almost as old as bookbinding itself..

cords so they extend several centimeters beyond the spine on both sides. Then we fray out the ends of the cords, fan them out, and adhere them to the waste sheet. Next, we tip the endpaper signature to the adjacent text signature with a thin bead of paste. Finally, we glue up the spine and round it with a hammer.

BIBLIOPHILE: Do we have to round the book? I feel that a half-round spine detracts from the overall appearance of the book. A square back just fits better with the right angles of the boards. I want only square backs on my books.

BOOKBINDER: Then you won't enjoy your book in the long term. I know from experience that with use a square-backed book will have a tendency to develop a concave spine, causing the individual signatures to jut out. That looks very ugly. Can we compromise? I will only slightly round your book so the signatures don't jut out, but it also won't end up with a half-round spine. I can promise you that a lightly rounded spine will not look ugly.

BIBLIOPHILE: Agreed. I am glad we can combine the expertise of a professional with the ideals of a bibliophile in a sort of marriage of convenience.

BOOKBINDER: Next, we back the book, one of the most important steps in giving the text block structural integrity. I'll need to explain this step to you in more detail. First, we replace the book in the backing press, but this time between two boards, with the rounded spine extending beyond the edges by a few millimeters, a distance determined by the binding style and the thickness of the cover boards. Then we tighten the press very securely and begin to work the spine with a backing hammer, so that the signa-

tures begin to fold towards the boards. We call this the shoulder, and the covering board will sit flush with the edge of it. Before hammering on the spine, we use paste to soften the glue we applied earlier, so the signatures will move more easily into their final shape. After backing, we paste up the spine again and smooth everything out before allowing the book to dry in the press overnight. The next day we take it out to trim, add a colored or gilt edge, and cut the cover boards to size.

The text block is mostly finished now, and the next step will be to attach the covers and then cover it in nice paper or leather. Those steps I'll explain to you when you bring me your books, because the next steps are dependent on the desired binding style.

BIBLIOPHILE: Many, many thanks, Master. I want to continue to be your attentive apprentice. Until tomorrow.

TUESDAY: A DISCUSSION ABOUT DECORATED PAPERS AND LEATHER

BIBLIOPHILE: Good morning, Master! I dreamed about your bone folder all night. I saw it as a young apprentice sitting on a stack of books and laughing at me because I imagined myself already a real book-binder. I had actually hoped to bring by some of my books today, but thought it might be better if we first agreed on how you will decide on what techniques and materials you would use. How do you think we should proceed, Master?

BOOKBINDER: A recurring theme will be the decorated papers that we use to cover paper case bindings, as a covering and endpaper for quarter cloth and quarter leather bindings, and for endpapers in full cloth and full leather bindings. There are many papers that I'm sure you'll consider, even fall in love with. I can't tell you about all of them because decorated papers are appearing very quickly, and there are dozens of workshops that create them. There are even factories being established to produce them, and artists of both genders are creating fantastically colorful designs to wrap around books.

Our traditional decorated papers, primarily the marbled ones, have become unfashionable. As you are a friend of contemporary bookbinding, you will say rightfully so. However, I think you will still be interested if I tell you how marbled papers are made. To

marble, one needs a rectangular tray made out of zinc. Into this we pour the size, a material that must have a slimy consistency. The best size is made from carrageen, or Irish moss as it is also called. Carrageen is a pale yellow or grayish algae that comes from the coasts of Ireland. The marbling colors are sprinkled onto the size with a kind of straw broom, and must contain a bit of ox gall to help them spread on the size. One can also use a mixture of soap and spirits.

There are many different kinds of marbling styles—to binders, marbling isn't a replication of marble but rather any number of fantastic colors and patterns. I will limit myself to describing the combed patterns. After sprinkling the colors onto the size, we first draw a stylus through the colors with a wavelike motion. Then we pull a comb made of cardboard or wood strips, into which needles are placed at regular intervals, through the size with the colors floating on top. Some combs even have two rows of needles, one of which slides and is moved back and forth as it is pulled through the colors. These motions produce

[T]o binders, marbling isn't a replication of marble but rather any number of fantastic colors and patterns.

the combed pattern. Next, we very carefully lay a sheet of paper on the size, and when it is lifted off, the pattern is no longer on the size but rather on the sheet. We marble book edges in a similar way, except that we clamp the book between boards that are flush with the book edge and carefully place that on the size. If we do so, the book edges and

endpapers will have the same colors and pattern.

The contemporary marbled papers aren't as formal as the old patterns. Instead, we put the emphasis on a tasteful and creative combination of colors with more random patterns. In some cases, rather than placing the paper on the size, we moisten the paper and spray several colors on it, allowing them to flow into each other. We can also spray on the colors and then crumple the paper to create unusual veined patterns.

BIBLIOPHILE: I've seen those papers and always felt they resembled clouds in the sky. I can look at them for hours and imagine that the colors and patterns move and change.

BOOKBINDER: There are also sprinkled papers, where different colors are applied to paper that is

hanging or at an angle. This way, the colors run down and bleed into each other.

Today, papers that are based on batik techniques are also very fashionable. I'm told that we learned this from the Javanese. When making batik papers, the pattern is applied in wax either by hand or machine. The wax masks off the areas that are not to receive color, thereby helping to create the design. The paper is then crumpled up before the color is applied, which causes the wax to crack and allows color to seep under the wax. As a result of this process, the batik papers exhibit a fine veininess throughout that also causes the design to float into the background.

But everything old is new. One of our oldest decorated papers is the paste paper, created by applying a mixture of paste and color, generally ground pigments, onto the paper. Once the colors are on the paper, it is very easy to create patterns and other effects. One can use one's fingers to create ribbons by wiping away the color, pieces of cork to create round marks, or a piece of wood or similar to create circles and lines. New decorative techniques include using carved rollers or linoleum blocks, brushes, or other implements. There are no limits to what can be used. There are even Expressionist papers. Those are really wild (laughing ironically); perhaps because of that you will choose them to cover your paper case bindings.

BIBLIOPHILE (laughing): So, you've figured me out. Why don't you give me samples of all the papers we've discussed so I can select books to go with them at home. I find that these decorated papers express so much atmosphere and emotion that one can always find a book to wrap in them. I'll take my time with the samples at home, because my passion for the book also includes the binding, and one of my favorite pastimes is thinking of the ways my favorite books can be bound. I won't be stingy, either, and as my budget allows I will give you books to bind in your beloved leather. First though, reveal the mysteries of leather to me.

BOOKBINDER: The naming of the different leathers is a mystery and, honestly, not always a pleasant one, because the leather tanneries have created a great deal of confusion in the naming of their skins. This is especially true if the name of particular leathers are used to indicate their geographic origin even if they no longer come from there. Ironically, many avoid using the name of the animal to identify the skin. What

we know as saffian and morocco, the most useful of the skins, are nothing more than goatskins. Both come from Africa. Saffian takes its name from the town of Saffi in Morocco, and the name of the morocco skin also indicates its origin. Saffian is very finely grained leather, whereas morocco is very coarsely grained. Another beautiful coarse-grained goatskin is cape-saffian. However, these three skins aren't tanned in Africa but rather shipped as preserved raw skins to Europe for tanning. In the past, beautiful morocco leather could only be created in England or France, but a number of years ago we Germans also developed that ability. The French have even had us make some of their morocco, and perhaps we bought it back as

**[D]ecorated
papers express
so much
atmosphere
and emotion
that one can
always find a
book to wrap in
them.**

genuine French leather. A more basic leather for binding is an East Indian saffian. What is known as "bastard leather" is not recommended for binding, and is the skin of cross-bred East-Indian goats and sheep, often with an embossed grain. I also urge you to avoid sheepskin, especially the thin, split skins. A binding in those is even less durable than one out of paper.

BIBLIOPHILE: You just spoke of confusion in the naming of leathers. I have an example, too. Recently, a bookseller showed me a book bound in chagrin leather. The poor man had no idea that chagrin referred to the graining and had nothing to do with the species. BOOKBINDER: Yes, those leather names are a real mess. An écrasé leather isn't just any crush-grained and polished leather, but crush-grained morocco leather. Much better is what they do in England and France—rather than pressing and polishing whole skins by machine, they burnish the skins with a polished steel iron on the finished book. Another very beautiful leather is pigskin, identifiable by the fine holes from where the hair was. The creamy color develops a patina over time that gives the binding an antique appearance, especially when it has been blind tooled. I'll tell you more about that later. We also use a lot of white alum-tawed pigskin.

Calfskin is naturally smooth and is also often used on bindings even if it is very delicate. Cowhide is very tough and therefore used mostly for very large

volumes that get heavy use. Then there are various rough or suedelike skins made from calf, cow, or sheep. The very expensive and coarse-grained sealskin has not proven itself to be durable. If one wants, there are also the skins of lizards, frogs, monkeys, snakes, fish, and other animals that can be used on bindings. And you have also heard that human skins have been used on books.

BIBLIOPHILE: What does tanned human skin look like?

BOOKBINDER: It is similar to tanned pigskin, with a grayish tone. As far as vellum is concerned, today we generally use the skins of sheep or calf rather than pig. Just as sheep leather is weaker than calf leather, so too are their vellums. Vellums are also much more expensive.

BIBLIOPHILE: What kind of skin does one use to get those beautiful yellowish, mottled vellums that have that antique look?

BOOKBINDER: It could be sheep or calf vellum. As you know, vellum is made from untanned skins that are dehaired and scraped clean while stretched on a frame. During this part of the process, the natural colorings of the skin remain. To get white vellum, the skin is further scraped with pumice and then chalk powder is rubbed in. Leather and vellum are prized not just for their durability, but also because on them the gold-tooled décor really shines. We'll need to talk about that another time.

BIBLIOPHILE: Let's leave it there for today! Tomorrow I shall bring you some books to bind.

WEDNESDAY: A DISCUSSION ABOUT THE PAPER CASE BINDING

BIBLIOPHILE (carrying books in both arms): Master, here are some of my books. I'm especially attached to the one with poems by one of our best. It is an unusual, tempestuous tome that at the same time is filled with melancholy. Using the decorated paper samples you gave me, I selected one that has wonderful colors playing in the background while the main pattern is strangely exciting.

BOOKBINDER: But you read the book already!

BIBLIOPHILE: What? I'm not supposed to read it? What does my reading the book have to do with binding it?

BOOKBINDER: Since the book was originally

untrimmed, you had to cut the folds in order to be able to read it. That makes it harder to bind the book, because I can't refold the signatures properly if they are misaligned.

BIBLIOPHILE: Thank you for explaining that, and from now on I will remember that a true bibliophile only reads his books after they are bound. Before we talk about the binding, I just want to mention that the poet wrote a dedication to me in the book and went to the edge of the page. If you need to trim the book, please don't cut into the dedication.

**It's not sour
grapes if I say
that a machine-
made book will
never achieve
the quality
of a good
handbound
one.**

BOOKBINDER: We have a trick for that. As you can see, the dedication is only on the right side of the page. The left margin still has plenty of room. What I will do is trim a hair off the left margin and reattach the leaf. As that page will now be slightly shorter on the right margin, it will not be cut when we trim the signature. We do this often, even with plates that are larger than the printed area. On the

other hand, if the dedication went across the whole page, our options would be more limited—perhaps we would fold that page as if it were a plate. So, you'd like a paper case binding for this one?

BOOKBINDER: Those were in all likelihood books that were bound by machine. It won't surprise you that as a Master in hand bookbinding, I don't have a high opinion of the machine-made bindings. That said, I also know those machines make books available to the mass of readers. It's not sour grapes if I say that a machine-made book will never achieve the quality of a good handbound one. Aside from the fact that the books are folded and sewn by machines, the more significant difference is in how the covers are created and attached to the text block. With a handbound book the cover is crafted on the text block whereas in a machine-made book they are made separately and only joined at the end.

BIBLIOPHILE: Yes, but the binding needs to be sound. I have bought bindings in paper-covered cases in the past that left me disappointed.

BOOKBINDER: Remember how on Monday when you first dropped in, I stopped working as I was about

to cut the boards to size? Well, in order to attach the boards and provide reinforcement at the hinges, we use a technique known as the Bradel binding (gebroschener Rücken). First, we take a strip of thin card the height of the boards and a few centimeters wider on either side of the spine to serve as tabs. To create the tabs, we measure the spine and then transfer that measurement to the center of the strip. Next, we make those two folds and check to see that the strip fits closely to the spine. Then we lightly pare the two long edges of the tabs so they will be less visible under the endsheet when the book is complete. When that is done, we glue out the tabs, fit the piece tightly to the spine, and rub it down onto the waste sheet on which we fanned the frayed-out cords earlier. Then it goes in the press for a quick nip to make sure everything is stuck down well. Only at this point do we attach the boards to the book. We do so by gluing them to the tabs, but set back from the shoulder so the book will open up easily. In this way we create a strong connection between the text block and the cover, and finally we cover it with the paper.

BIBLIOPHILE: I'm looking at this paper case binding and can't help but notice these narrow white vellum strips—see, I'm paying attention. I really like them and imagine they add more interest to some of the more monotone bindings.

BOOKBINDER: We call those "vellum headcaps." The headcap helps reinforce the otherwise paper-covered book at its most vulnerable spot. We can also add invisible vellum tips on the corners.

BIBLIOPHILE: I will let you know when I want vellum headcaps on my books. Vellum tips I want in any case, but I'll tell you whether they should be visible or invisible. So, now let's talk about what we want to do with the edges of the text block.

BOOKBINDER: They should of course match the dominant color of the decorated paper.

BIBLIOPHILE: I'll agree this time, but it is my opinion that one should not try to match colors too slavishly. You can also create contrasts to capture the mood of the text. I have a friend with a paper case binding covered in a paper with reddish and yellowish tones. The edges, endpapers, and label are black. It's a tome by Strindberg, and the binding was supposed to capture the melancholy nature of the poet. He also has an old edition of Schiller that he had bound in dark blue, with the edges and label in a shade of

yellow. The endpaper is grayish and matches the text. Now, I'm also of the opinion that the edge and endpaper colors should be the same. That way they look like a harmonious second wrapper around the book. But one should also be flexible, and I would like to have simple endpapers that match the text paper because these are simple bindings. Do you have any plain papers?

BOOKBINDER: Certainly. I always keep several varieties in stock. They come in cream and whitish colors with a variety of textures, from smooth to textured, to match the book regardless of whether the book uses machine-made or handmade paper. These varieties meet almost all needs. If by chance I can't match a paper with them, I'll tone the paper myself—coffee works really well.

BIBLIOPHILE: Master, I see that you have many tricks up your sleeve and I can entrust my books to you. Another thing, please don't put the label too far from the head. I think if the label is too low it divides the spine into odd panels and detracts from the elegance of the spine. On thicker books, a higher label can have a slimming effect. Oh, and please don't use too large a typeface; preferably match the face to the type used for the text—Gothic with Gothic and Roman with Roman. And finally, add my initials at the tail of the spine!

THURSDAY: A DISCUSSION ABOUT THE QUARTER LEATHER BINDING

BIBLIOPHILE: Master, today I'd like you to bind this copy of *Bachmann*. As it's a reference book, I don't think the paper case binding will be durable enough. But since cloth bindings don't appeal to me and the full leather binding is too expensive, I was thinking of a quarter leather binding, the one you call the *Halbfranzband*. Who or what is this "half of a franz" it refers to?

BOOKBINDER: The same reasoning that led you to look for an alternative to full leather is what led King Francis I of France to commission bindings in which only the spine was covered in leather. Other people believe that the name refers to the binding style originally being French.

BIBLIOPHILE: In this style, the connection between the cover and the text block is more structural, isn't it?

BOOKBINDER: Yes, you're right in thinking that

it is worked differently. The cords that we had cut back to a few centimeters are frayed out, fanned out, and pasted down on top of the board. Then a strip of wastepaper is put down on top of that, and the whole book is put in the press between tins and wooden boards. Next, the spine of the book receives two layers of strong paper, and the book is placed back in the press overnight to dry.

BIBLIOPHILE: May I ask a question? While that double layer of paper on the spine may make the spine stronger, doesn't it also make it more rigid, so the book doesn't open as well? I've often noticed that handbound books don't open well, something I can't have happen with my books.

BOOKBINDER: It is a very common superstition that when opened a book must lie flat and stay open. If that is what you insist upon, I cannot guarantee the durability of your book, because the sewing and other elements would need to be so loose that the book wouldn't stay together. The only books that really open flat are very large ones with heavy paper, like springback ledger books. You're a bibliophile and love your books as if they were your children, don't you? You would want the best for your children, why not for your books? Don't you agree that it is better to have a nice tight binding in your hands even if you might have to hold it open a little? And just as you wouldn't use force against your children, you wouldn't want to force your book open by breaking the spine, would you?

BIBLIOPHILE: Master, your logic is impeccable and I will keep what you said in mind. Let me ask you another question. A librarian acquaintance of mine once said that the French do a much better job with their quarter leather bindings than the Germans.

BOOKBINDER: That is absurd. What is most likely behind that statement is the difference between the French and the German styles in how the boards are attached. Remember how I described pasting the frayed-out cords on the board to attach it? What the French do is lace the cords through the boards to secure them. Here, let's see what Paul Kerstens wrote in his *Exaktem Bucheinband*: "It is commonly believed that a book in which the boards are attached in the French manner is more durable than one in which the German method is used. This is false. The boards are attached to the text block via the cords, and in all cases the failure was at the hinge and after many years

of use, not because the boards were not laced on..."¹

BIBLIOPHILE: Again, I can't argue with knowledge and experience of a true craftsman like you.

BOOKBINDER: Let's move along, shall we. Next, we cut the spine piece that goes between the text block and the leather from a piece of card. Onto this we glue our false raised bands, should those be desired. Then comes the very important yet messy task of paring the leather along the turn-ins so they conform to the shape of the boards and don't have ugly lumps. After that comes the even harder task of covering the book in the leather, a process I must describe in more detail, especially as it relates to the raised cords. For those it is necessary to use what we call band nippers to ensure that the leather sits tight to the raised cords and is even. Then there is also the headcap, which is

**You would want
the best for
your children,
why not for
your books?**

created by the turn-in of the leather at the head and tail.

A well formed headcap is the mark of a true bookbinder.

Finally, we put on the leather corners that we pared along with the other leather.

BIBLIOPHILE: Please don't put leather corners on any of my books. I know they are traditional with this binding style, but I think they destroy the aesthetic of the book because the elegant rectangular panel of decorated paper becomes one with six awkward sides. Not having the corners allows the decorated paper to be shown to its full effect.

BOOKBINDER: As you wish. However, to protect the corners I will then use the invisible vellum corners we discussed earlier with the paper case binding. What kind of paper do you want for the endpapers and sides?

BIBLIOPHILE: Because this a reference book, why don't we use the same sturdy handmade paper for the endpapers and the sides? I'm sure you can choose something appropriate that is either darker or lighter than the leather. How about a nice brown goatskin? Please use the same color for the edges as well. Oh, before I forget—the margins of this book are very tight, so please don't trim too tightly, as that will look unattractive. However, untrimmed it won't look that attractive either. Help me out of this dilemma.

BOOKBINDER: That's easy. I'll give your book rough-cut edges, also known as *tranche ébarbée*.²

BIBLIOPHILE: Yes, those. I'm surprised I didn't remember them.

BOOKBINDER: When we rough cut the edges we don't do it all at once in a guillotine, but rather trim each signature individually in the boardshear – just enough to even up the edges. This creates an even edge, but not a smooth one. Of course, one can't put a colored or gilt edge on if the signatures are trimmed this way. A French bookbinder once said that the secret to rough cutting the edges of a book lies in evening them without compromising the proportions. Rough cutting is extra work, though, because before the signatures can be trimmed on the board shear they must be slit open to determine where the best place is to trim without cutting off too much.

BIBLIOPHILE: I think I will want this *tranche ébar-bée* for most of my valuable bindings.

BOOKBINDER: I would like to suggest that on books where there is more margin along the top edge you have it colored or gilt. Even with simple bindings that are only trimmed on all three sides, we often decorate the top edge because doing so helps protect the text block from getting dirty from dust.

BIBLIOPHILE: What else do we need to discuss? Yes, I just wanted to say that for this quarter leather binding I don't want any fancy tooling. The gold on the title is enough.

BOOKBINDER: Perhaps some gold lines to either side of the raised cords?

BIBLIOPHILE: I'd rather not. I really like the raised cords as they are and don't think it's necessary to emphasize them further. When I have you bind some larger books this way I may have you add lines at the head and tail of the spine.

BOOKBINDER: Would you like to have a gold line on the cover leather where the paper overlaps it?

BIBLIOPHILE: That would need to be decided on a case-by-case basis. If there is a nice contrast between the leather and the paper then I don't think it's necessary. Otherwise, I'm not opposed to it.

BOOKBINDER: How should I do it with other books I bind for you in the future? Do you always want to use the same papers for the covering or the sides?

BIBLIOPHILE: I thought about that a great deal at home, and I don't think I want all my books to look the same. I like to see variety in my bindings as long as the differences aren't too dramatic. For instance, I like the combination of a nice monochrome endpaper

with a colorful paper on the sides. So, I think we're in agreement on what I would like for my quarter leather bindings.

Here are a few more copies of *Eckermanns Gespräche* that I would like to have bound in quarter vellum (without visible vellum corners, of course). For the sides, please use a nice green book cloth. I can imagine they would look very nice together. By the way, I will ask you to bind a different edition of the book in an identical binding at a later date. Will I need to bring this set with me then?

BOOKBINDER: No, that won't be necessary, as I make a template for every better-quality binding I make, on which I note the size, materials, colors, including samples of the materials. This makes it very easy to duplicate a binding.

BIBLIOPHILE: That is very sensible. Good-bye and until tomorrow! (As the bibliophile is on his way out, the Master begins to work, causing the former to quickly turn around and ask): What in heaven's name are you doing there, Master? You're working on the edge of a book with a tool that looks like something

a cabinetmaker would use!

**An art in itself
is the handling
of the gold leaf.**

Doesn't that damage the book?

BOOKBINDER: On the contrary, it is supposed to help the edge. I have the book clamped very tightly in the lying press

and am working the edge with this scraper to get it perfectly smooth so I can put on a beautiful gilt edge. I'm actually removing almost nothing from the edge of the book.

BIBLIOPHILE: Is a gilt edge difficult to do?

BOOKBINDER: And how! The edge must be prepared extremely carefully, scraped, and finally pastewashed so a mirror-like surface is achieved. This is especially difficult with the concave surface of the fore edge. An art in itself is the handling of the gold leaf. This gold is extremely thin, and each leaf is kept in a booklet between two sheets of tissue. The gold must be lifted carefully from the booklet and then placed on a chalked leather cushion—the chalk degreases the leather so the gold can be removed easily. It is cut with a gilding knife and tiled on the book's edge, which has already received egg glair with a special device. Then the press is tilted to allow the excess glair to flow out from under the gold. Watch out! I'm about to show you how it's done. See, the

glair is dripping and the gold is staying in one piece. Now the book needs to remain in the press for several hours, but not so long that the glair is too dry. Next, we begin burnishing the edge. First, we lay on a lightly waxed piece of white paper and begin moving across it carefully with this agate burnisher. Then we remove the paper and continue with the burnisher directly on the gilt edge to burnish it to an even shine.

BIBLIOPHILE: Is it essential that the edge is polished to a shine?

BOOKBINDER: Not necessarily. If we keep burnishing with the paper over the gilt edge we will create a matte finish to our edge.

BIBLIOPHILE: I think I will prefer the matte edge on my books so I can tell myself that even dull things can be of gold.

FRIDAY: A DISCUSSION ABOUT THE FULL LEATHER BINDING

BIBLIOPHILE: Master, I am happy! Look what I have here! It's a first edition of Heine's *Book of Songs*. I found it in a bookseller's stall. Do you have any idea how much I paid for it? Two marks and fifty! The seller had no idea what the book was worth. I have to admit that finding the book is as much fun as getting it for such a laughable price. I guess that's how we bibliophiles are. So, as a reward, I will treat myself to a full leather binding (*Franzband*). But everything needs to stay as it is, with absolutely no trimming, not even rough cutting. I'd also like you to preserve the paper wrappers by binding them in with the book, even the paper spine.

BOOKBINDER: Of course! Here binding in the wrappers is appropriate, especially given the scarcity of the volume, but we also do so in those cases where the wrappers have aesthetic value. However, I think it is excessive to do this with all books, the way the French bibliophiles like to.

BIBLIOPHILE: You're absolutely right! And because it's such a valuable book, I want to have it sewn on real raised cords. I'd also like to have sewn endbands like on all fine bindings, not those garish stuck-on ones.

BOOKBINDER: You mean a handsewn endband? Only a small number of bookbinders know the history of those. I imagine it started like this: the old binders sewed the book and at the ends added cords like those they were sewing around. When they

wrapped the sewing thread around them to get to the next signature, the handsewn endband got its start.

BIBLIOPHILE: I remember seeing that on more recent bindings, too. In one exhibition I saw bindings like that by Cobden-Sanderson, the well known English book art reformer who came to bookbinding after being a lawyer. He wrote a wonderful ode to the "Book Beautiful." How do we create endbands today?

BOOKBINDER: There are many styles, but I will briefly describe the most common ones. We start with a strip of card or vellum that is as wide as the boards are thick. Around this we wrap a piece of thin fabric, and we glue this to the spine of the book. Next, we wrap around the strip with different colors of silk thread. One color could be that of the leather and the other that of the edge decoration. The sewing itself is more like a wrapping, and requires a great deal of attention to detail to work the two needles so the threads all lie next to each other tightly, without getting twisted, and to ensure that the bead on the front is even.

BIBLIOPHILE: I think handsewn endbands are very attractive. Is this going to be an expensive book?

BOOKBINDER: Well, you do know that the price of leather has risen a great deal. There is also quite a lot of work involved with doing a full leather binding, especially with all the paring at the edges and along the joints, where we need to be careful not to make it too thin. When we paste out the leather it gets very soft and is easily damaged, so we need to work carefully and not damage the grain as we put down the leather and complete the turn-ins, making sure the board edges and headcaps are all even and neat. What kinds of endpapers would you like for your volume of Heine? They could be decorated or plain paper. Another option common with full leather bindings such as this would be using silk.

BIBLIOPHILE: No silk, please! For this binding please use a handmade paper in the same yellowed color as the text. Why can't the endpapers of a full leather binding be plain once in a while? Besides, handmade paper is a noble material in its own right. Please also give the endpapers more pages, like those I have seen with other leather volumes.

BOOKBINDER: You mean the English endpaper that is made of two folios stuck inside each other? How should I decorate the binding?

BIBLIOPHILE: Can we talk about it tomorrow? For

today I'd also like to ask you to bind this copy of the *Divine Comedy* in full calf vellum. One should always use vellum with an Italian book. Let's leave the vellum untooled, as it is so beautiful, and place a label on the spine in a condensed Roman font.

BOOKBINDER: If I may make a suggestion, I'd like to give this vellum binding a yapp edge on the fore edge, something that was common on many of the older vellum bindings. This makes the edge wider when seen from the front and helps protect the book's fore edge. If you'd like, I could also sew the book on vellum slips and lace them through at the joint so they are visible.

BIBLIOPHILE: This is going to be a beautiful binding! I can't wait to get it back. When will that be?

BOOKBINDER: Perhaps in four weeks.

BIBLIOPHILE: What, it takes that long to bind a book?

BOOKBINDER: Certainly not, but a binding is not just worked on. It also needs to rest. I mentioned at various times that the book needs to go in a press after certain steps. This is because the boards need to dry out under weight for periods of time, and then, when the book is done, it needs to be kept under light weight to make sure the boards don't warp. If I have to make you wait, it is so the covers of your books lie flat, which as it should be.

BIBLIOPHILE: I don't mean to rush you, I'm just very eager to hold the finished books in my hands. Unwrapping a new binding is like unveiling a new monument.

SATURDAY: A DISCUSSION ABOUT GOLD TOOLING AND FINISHING

BIBLIOPHILE: Today I'd first like to ask whether I should have an artist work on the design of my binding. However, dear Master, please don't think I'm asking this question because I don't trust you to do a good job. Although you are a master craftsman, shouldn't the binder be responsible for crafting the book and an artist for designing the book's décor?

BOOKBINDER: I'm not the least bit insulted and have worked with artists on many occasions. But you will need to concede that because of the skills required to execute our most challenging form of decoration, gold tooling by hand, a binder's designs are not necessarily inferior even if he has not collaborated with an artist.

Here, take a look at the tools I use.

First, the brass roll, into which up to four lines can be engraved: fine ones, heavier ones, or even a combination of those. There are also chains of small circles, dots, and other ornaments that have been engraved onto rolls. Then we have my set of gouges—thirty sections of a circle, each with a larger radius, from two millimeters to twenty centimeters. In this cabinet I have all my decorative handle tools. In the one next to it are my pallets in increasing lengths, some even with dots, dashes, or other decorations like on the rolls.

BIBLIOPHILE: I see how by using all these tools you can create an infinite number of designs. Without taking away from the skill and sense of design required, it's almost like a game of chess in that there are nearly limitless combinations that can be used to move the pieces. However, one ought to be able to recognize the enormous amount of work required and differentiate between it and tooling created by machines—the two are often indistinguishable. So, please leave some al-

**[A] binding is
not just worked
on. It also
needs to rest.**

most imperceptible imperfections, such as where two lines meet at angles, to accentuate the "hand" in your finishing, something most bibliophiles like to see.

BOOKBINDER: Well, even then it might not be possible to avoid using a blocking press to form some larger, more complex designs, for example a coat of arms or some specialized text elements.

BIBLIOPHILE: No, Master, under no circumstances. In a work whose distinguishing character is determined by the work of the hands, there is no place for machines. If binders are so quick to switch back and forth between handwork and that of machines, they shouldn't be surprised if their work becomes devalued. The masters of old were able to put large seals or coats of arms on their bindings, too, without resorting to a blocking press.

BOOKBINDER: I know that. The old masters had to exert physical efforts that today appear superhuman.

BIBLIOPHILE: Well, since today's tools are smaller than the ones of old—without sacrificing aesthetics—I don't see why you can't put a little more effort into doing it by hand if a larger design or type is needed. When I was in England, I visited the shop of Joseph Zaehnsdorf, the German binder who made his name there, and was able to see how complete titles were

tooled in gold using individual letters. The finisher who did this work was amazingly skilled.

BOOKBINDER: Hand lettering, as the English call it, does not exist in Germany. We don't even have any shops that possess the sheer quantities of hand letters in various sizes that are required. What I do is use brass letters in the stamping press or a hand typeholder with which I tool the title line by line on the spine. I use the same typeholder on the cover of the book when I need larger fonts.

BIBLIOPHILE: See, Master, you can do it without machines. And since you told me about your pallets and gouges I know that you can also piece these together if the design calls for it.

BOOKBINDER: Of course it can be done, and it is done often, but let me tell you more about the technique of gold tooling by hand. As there are several manuals about this aspect of bookbinding, you will understand if I explain it in general terms and focus on the more important aspects. However, there are many more very important small details that a finisher must know. Let's take a border design with straight lines and a larger ornament that will require the appropriate rolls to complete. The center ornamental design will be created from two or three simpler ornaments that are arranged together. There are also designs that are built up from an arrangement of several dots but repeated hundreds of times. Some very complex designs requiring thousands of impressions were created using only a small handful of tools.

BIBLIOPHILE: I image that similar to the gilt edge, the gold leaf is laid on the leather and then pushed into it using the roll, pallet, or stamp.

BOOKBINDER: Well, it's not that easy. First I need to arrive at the final design using the tools and other ornaments. Then I use those tools to stamp the design on a piece of paper. I then copy the design onto a tissue paper that I will lay on the binding. Next, I impress the design through the paper using the specified tools. When I'm done, I remove the tracing paper with the design and carefully brush glair into the impressions made by the tools. When that is dry, I apply a very light amount of grease, such as Vaseline, with a ball of cotton to help hold the gold in place, and then put down the gold, making sure it sits in the impression so the design can be seen. Now I can do the actual finishing with gold. The tools are heated up and impressed into the leather, setting the gold down

and binding it to the leather. This can require a good deal of physical effort, but more important is maintaining the tool at the proper temperature—too hot and it burns the leather; too cool and the gold does not adhere. The humidity of the leather also plays a role, as does the dwell time—the amount of time the tool is in the leather. If I hold the hot tool over the glaired impression too long, the heat can dry out the glaire and the gold won't stick, either. A good eye and very steady hand are critical, as one will need to work accurately, yet fast. Of course, not every impression will be perfect—the gold might tear or have gaps. That means we must be able to go into the same impression multiple times, even with complex tools. This is especially difficult with rolls, where the design has no beginning or end. Titling on the spine is also very difficult. One can also achieve rather attractive

Some very complex designs requiring thousands of impressions were created using only a small handful of tools.

designs with blind tooling, meaning tooling without gold, especially on volumes with lighter leather, such as natural pigskin. On these the tooling appears dark brown. But achieving an even brown tone is not easy because the leather needs to be evenly dampened, the tool temperature consistent, and uniform pressure needs to be applied so the leather does not get burned.

BIBLIOPHILE: Is that all on the subject of tooling? I did not mean to imply that tooling was easy, and I appreciate the amount of skill, experience, and steely concentration that are required of the craftsman.

BOOKBINDER: And spending all day hunched over tools and next to a hot finishing stove isn't pleasant, either.

BIBLIOPHILE: What I really wanted to get at with my earlier question was to learn more about some of the other decorative techniques, like leather onlays and inlays.

BOOKBINDER: Hand tooling is the basis of those, too. When the gold-tooled binding based on the techniques of the Arab world arrived in fifteenth-century Italy, that's when design in bookbinding really began. Prior to that, it was the silver- and goldsmiths, the ivory carvers and others, who decorated the bind-

ings. Before gold there was also blind stamping and lederschnitt (called cuir-cisele in French; a technique where leather is cut into and modeled). It was with gold tooling that book decoration became an integral part of the book, and the Renaissance had a great influence. In addition to gold tooling, Arab bindings also exhibited the first use of onlaid and inlaid leather, the latter being more prevalent. Contemporary binders know and still use both techniques, for which we have to pare the leather tissue-thin. Often we will surround the onlays with gold tooling as well.

BIBLIOPHILE: Master, when I came to you today I asked whether I shouldn't rather have an artist design the décor of my full leather binding. This question has now been settled between us; think about the comparison with the chess game. So you will understand that I will reserve the right to work with an artist on books that need that certain something that cannot be provided by your tools.

BOOKBINDER: We bookbinders are not opponents of creative collaboration. But let me remind you that bookbinders have always created their own tools, too. Think about the fanfare style that we owe to the French master Nicolas Eve, who lived in the sixteenth century. In the eighteenth century, French binders took inspiration from lace and gave us the fers à la dentelle. Le Gascon, who lived in the seventeenth century, gave us pointillé, a luxurious style of finishing consisting of dotted lines and curves on bindings. Even today, leading finishers are creating tools for tooling. We also know that we owe much of our inspiration to famous bibliophiles. I'm certain you know the name of the sixteenth-century French diplomat, Jean Grolier, the most famous of all bibliophiles, who had Italian bookbinders create a style to his own specifications. Even the books of Thomas Maioli, the Hungarian king Matthew Corvinus, and the French kings of the sixteenth, seventeenth, and eighteenth centuries and their wives and famous mistresses, are easily recognizable to bibliophiles. I will even mention a great German bibliophile—Germany was poor in bibliophiles for a very long time, a situation that has fortunately changed—the Elector, August of Saxony, who lived in the sixteenth century and for whom the most famous German binder, Jakob Krause, created many fine bindings. The Jakob-Krause-Bund, the most well known federation of German design binders, was named after him. I could go on and give you

the names of further famous French, English, and German binders.

The bookbinder needs clients who value his work and think about it.

BIBLIOPHILE: Master, I thank you, and as a proper bibliophile will study the history of design binding. However, you have shamed me a bit, as I will not be able to compete with your Groliers and Maiolis. But don't you think it is not just

important for the great bibliophiles but also for the book as art and for you as bookbinder that there are "lesser" bibliophiles who find joy and appreciation in even the simplest binding?

BOOKBINDER: I agree completely. The bookbinder needs clients who value his work and think about it. I have learned a great deal from you over these past days.

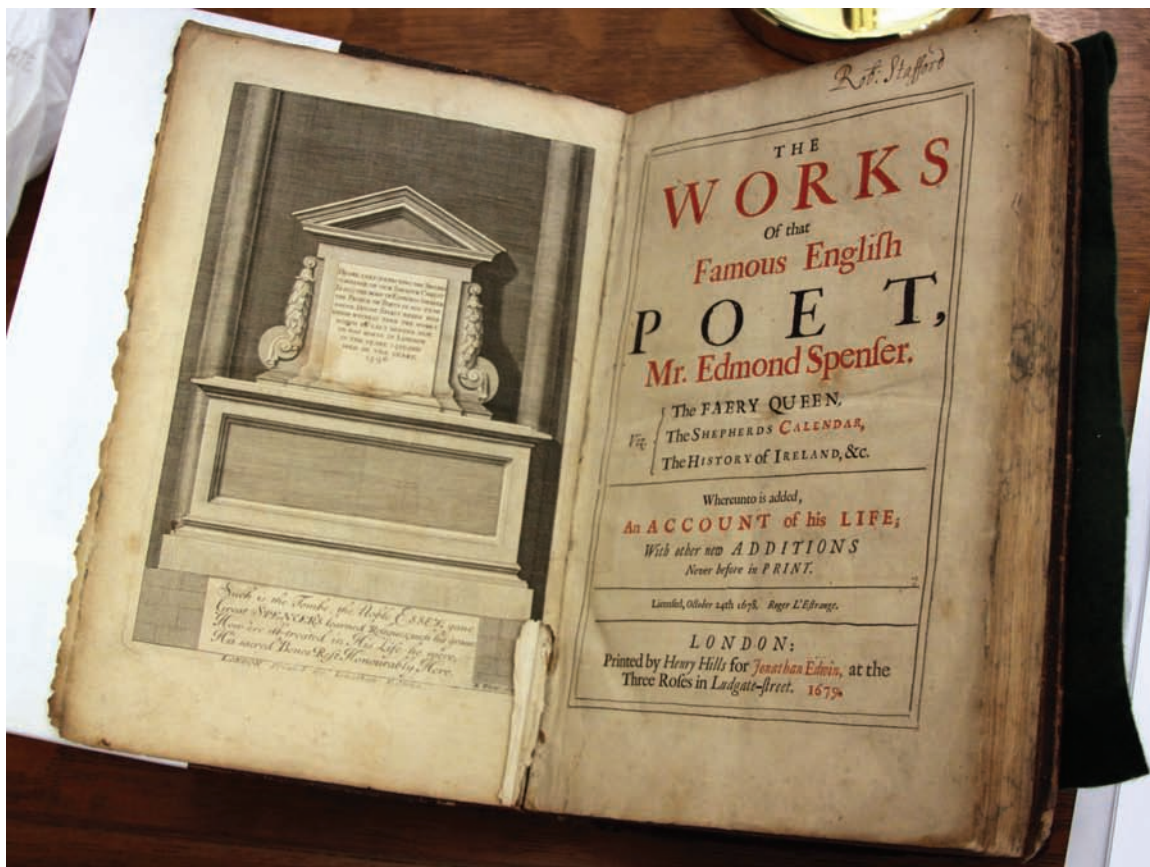
BIBLIOPHILE: We have both learned from and encouraged one another. I have taken everything you have told me over the course of this week and written it down exactly and intend to publish it as a small booklet for the use and enjoyment of bibliophiles and their bookbinders. And do you know what I want to call our book, the one we created through our dialogue over the last several days?

THE BONE FOLDER!

NOTES

1. Translator's Note: The source, which Collin did not include in his text, is Paul Kersten, *Der Exakte Bucheinband*, Halle (Saale), W. Knapp, 1923, pages 22-23.

2. Translator's note: "Trimmed edge." The German term is *ebbarierter schnitt*. See <<http://www.cbbag.ca/ResourceListsWeb/TranslationOfTerms.html>> .



Top: Frontispiece and engraving of *The Complete Works of That Famous English Poet, Mr. Edmund Spenser*, from the edition held by Kansas State University. Bottom: Two copies of the Spenser. The one on the left is owned by the author, and the one on the right is the copy held by Kansas State University.

WHERE DOES THE CATALOG GO?

SURVEYS OF OLD PRINTED BOOKS, WHAT WE CAN LEARN FROM THEM, AND WHY THEY MATTER

MOST READERS TODAY TEND TO LOOK at a book as a repository of information divorced from the medium containing that information. Different copies of a text—whether in a printed book, on an electronic reading device, or sitting as a text file on a computer—are considered to be fundamentally the same. Because of this, most readers also tend to divorce composition from content in our minds and give precedence to the latter. This idea of the book is synchronic: it limits itself to the information that a lone copy of a book provides. Even when there are multiple physical copies of a book, in any given medium, the realities of the production systems of modern publishing tend generally to make each and every copy identical as it is released, if not for some years afterward. And, of course, the rise of electronic copies of a book suggests that a book's contents will remain identical across multiple computer files, with the same content, even as ever-increasing numbers of copies are downloaded to electronic readers worldwide.

This is, however, an inherently false assumption. Not only is the physical composition of a book subject to change, the text itself—that is to say, the information the book conveys as well as the physical composition of the book, across all copies—is in fact dynamic. This becomes apparent when considering a hypothetical case that anyone who has shopped in a used bookstore has dealt with: choosing between two copies of a ten- or twenty-year-old hardcover book. In one case, the dust jacket is gone. In the other, there are creases across some of the page corners where a reader dog-eared a page to return to later. If the book is an academic text, one copy might have marginal notes that are helpful to future readers while the other does not. In both cases, though, the individual copies of the book are no longer identical. Even with electronic books, the concept of a platonic version of the text is false. Electronic copies of books—depending on the file format in which they are released—are vulnerable to a variety of changes. These changes include the possibility of file corruption and readers altering the text to suit their own purposes.

Of course, when these alterations and errors occur with modern books, we tend to compare them against an authoritative ideal—the original computer files or galley proofs used to publish the book, perhaps, or a copy that has been sitting in the publisher's archives. And where this is possible, all is well. There are, however, instances where the publisher's archives no longer exist and the galley proofs have been lost. Even more troubling from the standpoint of seeking an authoritative text for



Matthew E. Davis is a doctoral student in the Department of English at Texas A&M University. His interests include the relationship between the text and possible staging in Middle English drama; Arthuriana as an iterative, resonating, alive and growing body of literature; issues of cultural transmission in translation of texts into Anglo-Saxon; and material culture, particularly how the physical remnants of medieval and early modern culture—be it architecture, illuminations, manuscripts, or early printed books—can inform how a text is understood to be used within its culture.

comparison are instances concerning books printed on a hand operated letter press, or common press, composed from the mid-fifteenth to mid-nineteenth centuries. In these cases, not only does the physical form of the book change over time after publication, but the text itself has often been altered at the time of printing, whether through the introduction or correction of errors in the printing process.

This dynamic approach to understanding the printing of a text means the authoritative status of the content as laid down in an individual copy of a book, even at the time of publication, is an illusion. In these cases, it is not enough simply to take the individual book and claim it as authoritative. Instead, a reader must look at the text—the sum of all the books printed in a particular edition—equally dynamically. Only by doing this can something approaching a true authoritative stance, in the way that we think of when we consider galley proofs or the master computer files in a publisher's archives, be gained.¹

One such text that lends itself to this form of analysis, partially due to the fact it is an early book composed and printed by hand and partially because each individual copy is over 300 years old, is the 1679 *Works of that Famous English Poet, Mr. Edmund Spenser*. I am lucky enough to have a copy of this book in my possession and direct access, through the kind permission of Roger Adams, to another copy held by the Hale Library at Kansas State University. In addition, there is a collation formula for the copy of this book held by the Tudor and Stuart Club at Johns Hopkins University printed in Frederic Johnson's important reference work, *A Critical Bibliography of the Works of Edmund Spenser* (1934), and an electronic version of the copy held by the Huntington Library is available in Early English Books Online.² This gave me four copies of the text which I either could collate myself or which had existing collational formulae to modernize and work with. Using these four copies, it became very clear that there were differences among the copies that had occurred at the time of printing. Furthermore, by asking institutional holders of this

The authoritative status of the content as laid down in an individual copy of a book is an illusion.

book as well as private collectors about the existence of errors in their copies, these four copies could be placed in a larger context.

Through the process of collation—the compiling of a shorthand description which will provide someone with the characteristics of a book's construction—the various states of an edition of a text can quickly be identified even if the physical copy is not in front of them. Collation formulae for the four copies of the Spenser book discussed here were created using the formula in Fredson Bowers's *Principles of Bibliographical Description* (1962). Using this formula, the collation for my particular copy of the Spenser text is as follows:

2⁰: 326 leaves, B-3Z⁴+A⁴+4A-4I⁴+4K²+5A-5C⁴,
[\$2 (2K1 missigned K, 2N1 missigned N, 4A missigned 3A) signed]

The book is a folio text, as indicated by the 2⁰, consisting of 81 quires, or gatherings of leaves. The book itself is done in fours, meaning there are four bifolia per gathering. This is indicated by the superscript 4, while the one superscript 2 indicates a quire in two—a single printed sheet folded in half. Each letter notation indicates the signature of each gathering, and the

Through the process of collation, the various states of an edition of a text can quickly be identified.

errors in the signature are noted in square brackets.

The particular composition of my copy is not the same as that of the other three texts. They each contain a frontispiece, which is missing from my copy of the book. Furthermore, the section of the book containing the life of Spenser—the A quire in all the surveyed copies of the text—had been moved in my copy to a spot just after the text of the *Faerie Queene* either during the book's original binding or when it was rebaked in the nineteenth century. You can see this in the formula: while a book usually would start with A, this copy begins with B, and the A quire appears after quire 3Z. This change does not exist in any of the other copies I collated, nor did it occur in any of the institutional copies surveyed.³

Accounting for a book's gatherings is only one aspect of describing the book, however. A pagination

of the text, noting the run of the page numbers, also needed to be done. This proved not to be an easy task. The book is paginated in three series, which would seem to indicate that it was intended to be split into three volumes. However, at closer examination, it is unlikely the book was actually intended to be separate volumes because while the first and third series would make for good-sized books at 339 and 270 pages respectively, the second series is only sixteen pages long. It therefore seems more probable that the book was always intended to be printed as a single volume, and the page numbers should be taken as indicating series rather than volumes.

Noting the pagination, especially when the numbering is split into series, is even more difficult because the pagination of the text is filled with errors. The pagination of my particular volume of the text is as follows:

2^o: 326 leaves,

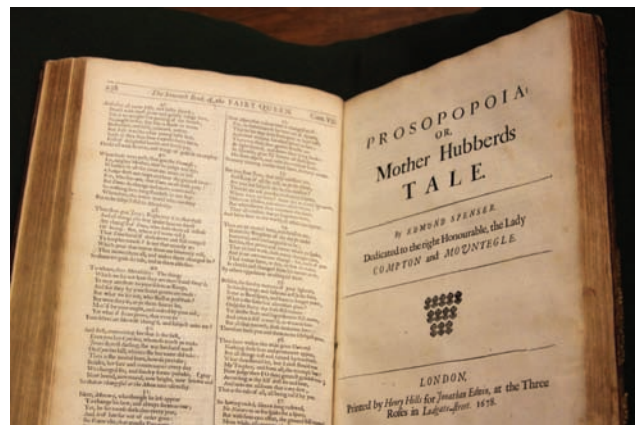
Series I: pp.1-14, 14-173, 174-176, 177-327, 328, 329-338, [2], 339. (duplicating 14, misprinting '140' as '132', '141' as '133', '276' as '284', '277' as '258', '338' as '238')

Series II: pp. 3-4, 5-16.

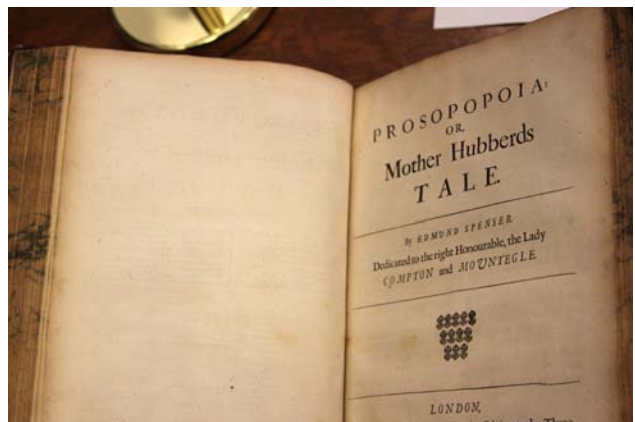
Series III: pp. [8], 1-9, 14-49, 50-52, 53, 54, 55-76, 77-78, 79-80, 81-82, 83-96, 97-98, 99-102, 103-104, 105, 106, 107-118, 119-120, 121, 122, 123-128, 129-130, 131-139, 140-144, 145-150, 151-152, 153-159, 160, 161-165, 166-170, 171-175, 176, 177-181, 182, 183-184, [8], 185-187, 188, 189-258, [2], 369-391, 392 (misprinting '3' as '10', '4' as '11', '5' as '9', '6' as '10', '7' as '11', '8' as '10', '9' as '11', '53' as '153', '105' as '97', '112' as '104', '116' as '108', '117' as '109', '389' as '387')

In this formula, italicized numbers indicate where a page number is not printed but can be inferred to be part of the sequence of page numbers based on context, while the numbers in square brackets indicate sequences of pages where the page number is not printed and cannot be inferred. Errors, such as misprintings and duplications of page numbers, are indicated in parenthesis.

As can be seen by the section of the pagination formula in parenthesis, there are numerous pagination errors present in both series I and series III. In



The incorrectly placed title page of *Prosopopoia* from the author's copy of the text.



The correctly placed title page of *Prosopopoia* from the Kansas State copy.

addition to the printing errors, the third and fourth leaves of quire Xx are transposed, making the title page for *Prosopopoia* appear in the wrong location, as shown in figure 1. This was not an error in rebacking the book, as a single leaf was out of place, rather than both leaves of a bifolium.

Even more interesting, though, are the differences in pagination errors between my copy of the text and the other three copies I collated. My copy of the text had 153 printed where there should be 53, but the Early English Books version had this page number printed correctly. Likewise, the copy held at Johns Hopkins retains the error my copy contains, and in addition both versions print 13 where the numbering should be 12, and 14 where it should be 13.

At the time I undertook collations of the four texts, I also sent out letters requesting collation formulae or the answers to questions regarding the errors I had noted in my text to all institutional holders of copies as well as all booksellers my associate, Mark Houston,

and I knew to have copies.⁴ Of these, all but one of the institutional holders and one of the booksellers responded. Of those responses, 55 provided either collational formulae or the answers to our questions. The total number of errors noted, with how many respondents reported the error, is as follows:

Type of error Number of times reported

Signature errors

2K1 missigned K	37
2N1 missigned N ⁵	18
4A missigned 3A	48

Transposition errors

Xx3 and Xx4 transposed	8
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Pagination errors

A. Errors of Duplication

Series 1

14 duplicated	46
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B. Errors of Misprinting

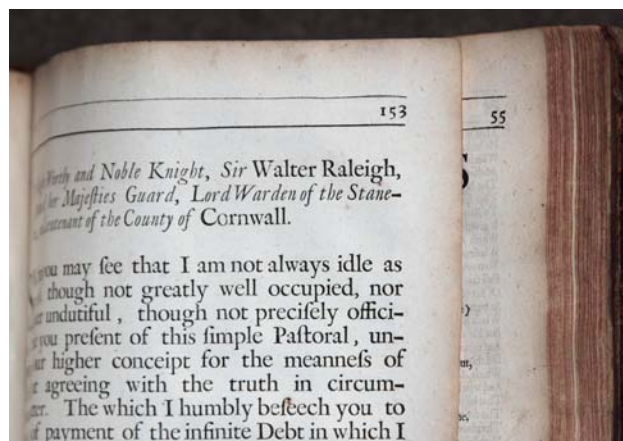
Series 1

140 as 132	48
141 as 133	48
276 as 284	50
277 as 258	50
338 as 238	50

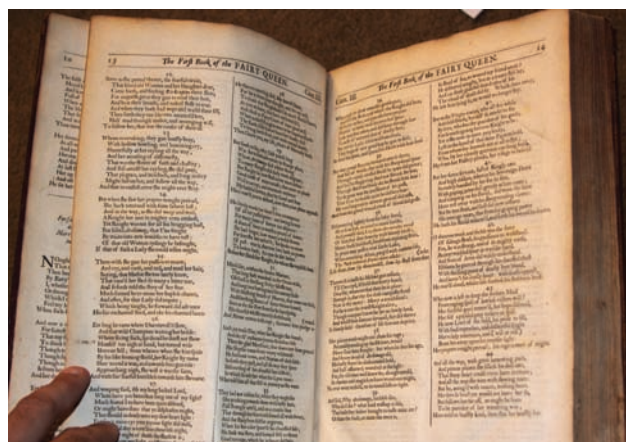
Series 3

3 as 10	49
4 as 11	49
5 as 9	48
6 as 10	48
7 as 11	48
8 as 10	48
9 as 11	48
53 as 153	35
105 as 97	48

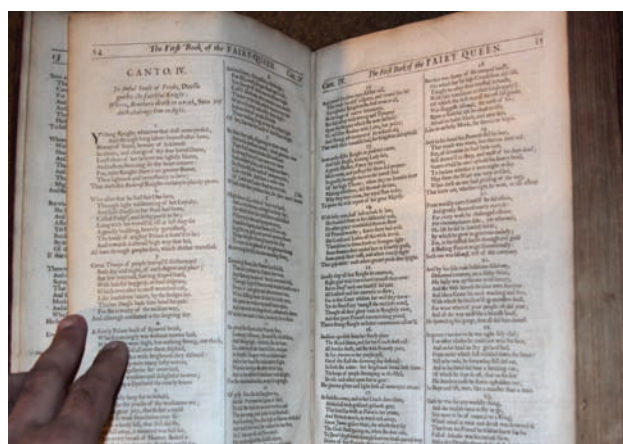
As can be seen both by my collation and by the answers I received to my inquiry, there are errors that appear to be fairly consistent throughout the copies surveyed but there are also errors, most notably the transposition of Xx3 and Xx4 and the misprinting of 53 as 153, that do not appear consistently in all copies of the book.



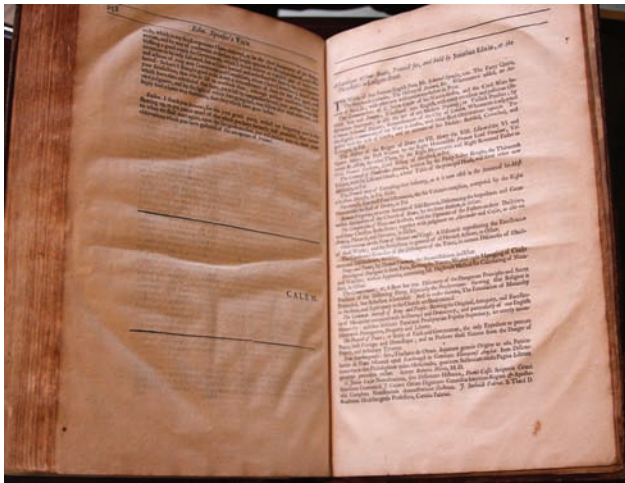
The error in printing showing page 53 printed as page 153, from the author's copy of the text.



The page numbers here, from the author's copy of the text, run 10, 11, then skip to a sequence of 13, 14 instead of 12, 13.



The next two pages, showing the correction on the printer's part, resulting in a duplication of the number 14.

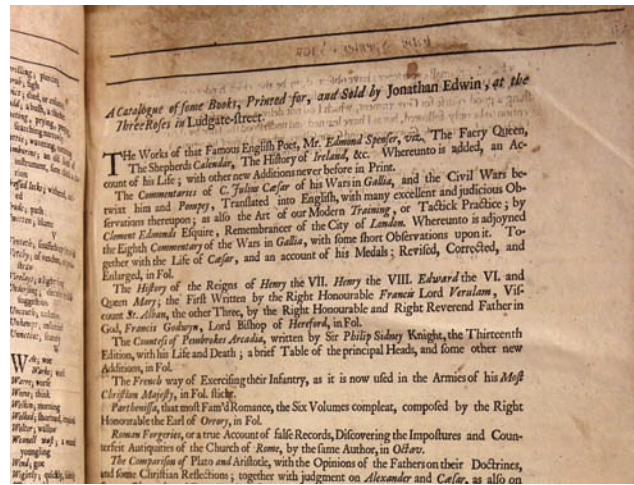


The catalog page as it exists in the author's copy of the text, after the text of the *Shepherd's Calendar*.

Collation takes into account more than the identification of misprints. In addition to the consistent printing errors, examination of the Kansas State copy of the book also shed light on a particular difference between its text contents and mine.

In my copy of the text there is a catalog page as the second leaf of the 4K quire, which is located after the text of the *Faerie Queene*. The catalog page is also in this location in both the Early English Books and Johns Hopkins copies. In the Kansas State copy, however, this second leaf has been moved to the very end of the text—an alteration that occurred frequently in my communications with institutional holders of copies where the catalog page was still bound in with the rest of the book. Since the catalog page was an advertisement and not part of the intended content of the book, this begs the question of where the page should correctly lie in an authoritative copy of the text. The location can not be immediately determined from context. One can argue that the catalog page was originally bound at the end of the text. Just as easily, a case can be made for the life of Spenser occurring after the text of the *Faerie Queene*. Since both the life of an author and a catalog are written by the printer, rather than as part of the exemplar from which they would compose the text, the choice of where to place each is entirely in the printer's hands. For this reason, the ability to compare various versions of the same text provides insight as to how an authoritative version of the text might have been constructed.

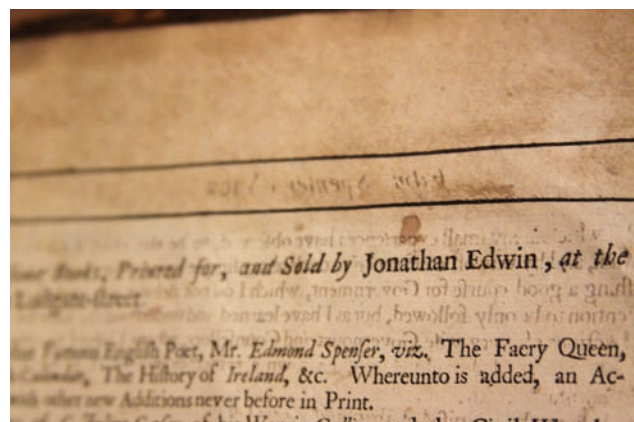
In the case of the moved A quire containing the life of Spenser, it is relatively easy to determine from the survey that the original intent was to have the life of



The same page in the Kansas State copy, placed after the glossary at the rear of the text. Note the faint impression of "Edmund Spenser's View" at the top of the catalog.

Spenser appear before any of his works. Even if the A signature for the quire was not printed, indicating where the printer intended it to be located, the copy in my possession is the only copy that appears this way. It is therefore likely that the intent was to print the A quire as the first gathering of the text. In the case of the catalog page, though, there are differing locations among the institutional copies, and only by comparing two copies of the catalog page does the intended location become clear.

While my copy of the text contained no evidence of the page's intended location, in the Kansas State version of the text the pages had stuck together in the quire containing the catalog page, which left traces of the facing page on the opposite leaf. Thus, the catalog leaf bears obvious traces of the words "Edm. Spenser's View," which is what was printed on the opposite leaf



A closeup of the top of the Kansas State copy's catalog page, clearly showing that the other half of the bifolium this page was printed on originally was not the glossary but instead "A View of the State of Ireland."

in my copy. This meant that the current location of the leaf in the Kansas State copy was incorrect, and thus our hypothetical authoritative copy should have the catalog after the text of the *Faerie Queene*.

Obviously, the collation of only four volumes, even when compared against the information provided by institutional holders, is not enough to make a definitive statement. It is enough, however, to make some broad claims about the process of production and correction during the print run of the text in order to begin to establish the order of states or issues within the edition. The duplication of page 14 was caught first and corrected, but that correction introduced the error in numbering that we find in the Johns Hopkins copy. Next, page 53 was corrected, removing the 1 from 153. None of the other pagination errors were corrected, but some of the signature mark errors—most notably the printing of K for 2K and N for 2N—were also corrected.

This order seems likely because of the tendency to strive toward exactitude in composition. The printer's techniques to ensure all the leaves are arranged correctly for the binding of the text take priority over the methods used to allow readers to keep their place. Catchwords, the first word of a leaf that is printed at the bottom right corner of the prior page to tell the composer which leaf comes next in a sequence, are never incorrectly placed in a quire in any edition surveyed, but the signature mark—the letter used to indicate the order of quires—is sometimes incorrect or moved to a different leaf in the quire. It seems probable, then, that the printer would make sure each leaf was correctly placed in a quire through the use of catchwords, a practice of the scribes of medieval manuscripts absent from the earliest printed books but common from the sixteenth to late eighteenth centuries (McKerrow 1964: 82, Gaskell 1972: 53). The catchwords would also serve as an aid to the binder, but because books were often sold as composed but unbound quires, the letter signature helped the binder to know the correct order of the quires. For this reason, it was less important to the printer to actually have correct signature marks, since the binder may

Even with a collation of only four volumes, we can begin to establish the order of states or issues within the edition.

or may not have had a working relationship with the printer. The signature marks also allowed the printer to know he had sold the correct number of leaves and the correct number of quires to the customer, and thus served a purpose to the printer that the catchwords did not. Pagination, being only for the benefit of the reader, wasn't important at all and so was rarely corrected.

The fact that these changes can and did occur during the print run of a text means the idea that a single copy of an early common press book can have the same authority as our modern galley proofs or master computer files is deeply suspect. If different combinations of errors, introduced for the most part during production, occur when comparing only four copies of a text, then it seems the number of combinations possible in the entire corpus of one of the early printed texts is quite astonishing. The tendency toward errors also tends to bring into question the usefulness of book digitization from a single copy with no ancillary material when it comes to these early printed texts.

Since it is obvious that some of these texts (and important ones at that) vary widely between individual copies, the danger in digitizing early books is that the digitized variant will be perceived in much the same way that we tend to see contemporary texts: as a single edition of the text, identical from beginning to end. Any errors introduced in that particular volume would then be assumed, by our modern view of how a book and a text interact, to carry through to all the copies of the text, which is something that is patently not the case.

Additionally troublesome is that the digitizers may correct perceived errors, creating a version of the text with no physical analogue.

Additionally troublesome when viewing digital versions of these texts is the possibility that the digitizers will correct what they perceive as errors in composition, thereby creating a version of the text that has no physical analogue. For example, the Early English Books version of the Spenser is the digitized version of the copy held at the Huntington Library in San Marino, California. That copy of the text may or may not have the transposition of leaves Xx3 and Xx4 that occurs in my copy, where the title page of



The author's copy of the Spenser, showing the correction made to the running header by a previous reader.

Prosopoeia is printed incorrectly and placed in the wrong location in the book. There is some indication, based on looking at the PDF file of the digitized book, that manipulation of the order of pages occurred, but without access to the Huntington copy that cannot be determined definitively.

Consequently, for scholars without access to physical copies of the text, the version they are relying on and, on some level, assuming to be definitive, may not be a copy of the text that has any physical validity at all. This does not, of course, render either the Early English Books version, the Huntington copy, or for that matter any of the copies referenced here any less definitive in themselves, but it does suggest the need for some sort of overarching framework, similar to that used to determine the genealogy of manuscript texts and different editions of works by the same author in variorum editions, to make differences between texts clear to scholars without ruining the usefulness of the book for casual readers. Such work is done in some cases at libraries, but generally only as it concerns their own copy of a book, instead of as that book exists in a continuum of books that make up the extant print run of a text.

The way to do this would be to undertake a collation of every copy of the text available in much the same way that the four texts referenced here have been collated—which is, indeed, what the field of bibliography is for. By doing so, those errors present in each copy would be determined. Moving from there, a master list of errors, with the number of copies in which each error occurs, would be attached to any digital copies of the text and possibly to any library records of the physical copies. This would allow a scholar to be aware of known variants within a print run and determine which variant the particular copy they are working from may be. It would also provide



The Kansas State copy of the same page, lacking the correction to the running header.

a ready-made resource for scholars wishing to determine how errors were caught and corrected during the printing of early books, as with enough data patterns could be determined which in turn might garner solid evidence. While the survey I undertook for this copy of the Spenser is the beginning of this sort of work, providing a series of questions to be answered does not have the same level of exactitude as formal collational formulae for each and every copy.

From a literary rather than a bibliographic or printing history perspective, compiling such a list for Spenser may not be a priority, given that the errors are primarily those of composition—problems with printing page numbers, transposed pages, and sections of the book moved to other locations. It could be argued that the expense of collating all of the available copies of early printed books where this is the case far outweighs any benefit. But should such printing errors occur in the actual text block—say through the omission of a character's name or the use of incorrect punctuation—then which copy of the text is chosen to be digitized could have significant consequences for scholarship on the text, especially if the text is not as well known as the works of Spenser.

For example, several times in my copy of the Spenser, the running header of the second book of the *Faerie Queene* is incorrectly printed as the running header of the first book. A previous owner has gone through and painstakingly corrected this, but such corrections are lacking in the Kansas State copy of the text, which contains the same errors. If the Kansas State copy were digitized and the book was not something particularly well known to the reader, uncorrected references to the second book would be incorrectly assumed by the reader, who would have no reason to doubt the text, to be references to the first. As the digitized copy would have a wider audi-

ence than the actual physical copies of the text that might contain corrections, such errors would eventually end up being held as valid, even though in reality they are not.

A further example is found in the case of the Johns Hopkins copy of the book used in Johnson's collation. Earle Havens at Hopkins responded to my survey of institutional copies with full and very detailed collation and pagination formulae, indicating that they had three copies of the text, with one copy held in the Milton S. Eisenhower Library and the other two held in the John Work Garrett Library. He did not, however, designate a particular copy as the Tudor and Stuart Club copy Johnson had used in putting together the physical information from which I made my collation, instead identifying both of the copies held in the Garrett Library as being Tudor and Stuart Club copies. Looking at the information for each of these copies, the particular copy that Johnson was using can be determined. Not only is the Eisenhower copy not indicated as being held by the Tudor and Stuart Club, it contains the transposition between Xx3 and Xx4, which Johnson does not note. Similarly, the second copy designated by Hopkins as a Tudor and Stuart club copy has a correctly numbered page 53, which is inconsistent with Johnson's description. This leaves the first copy in the Garrett Library, which does match Johnson's formula. After looking at this, I cannot help but question why Johnson did not avail himself of the other two copies when doing his description (assuming, of course, they were in residence at Johns Hopkins in 1933), which stresses even more strongly the need for thorough examination of all known copies extant through a project like this one.

Thus, if we are going to consider an early printed text to be authoritative, or present it through digitization as authoritative, we need to understand the entire process of production of that text, which can only occur when we are aware of the errors that were introduced and corrected during the production of the text. A full survey, conducted carefully, will determine the distribution of errors, and the attachment of such a survey to the existing digital copies will help to alleviate any false sense that they are, in fact, definitive, authoritative texts. It is my hope to be able to do this in the future for the 1679 Spenser and other early printed texts, should the resources prove available to do so.

NOTES

1. Obviously, manuscript copies of a text have to be considered as well. Manuscript copies in the author's hand do provide a baseline for an authoritative version of a text. The problem, of course, is that with many of the early common press books, the exemplar is not entirely known or does not exist. In these cases, the printed copy of the text is the closest we can come to an authoritative text.

2. Early English Books Online is available by subscription at <<http://eebo.chadwyck.com/home>>.

3. This shift is interesting because there is no indication of damage to the A quire, but there is some damage to the first page of the B quire. If there was significant enough damage that the π quire in this text (the frontispiece that appears in the other copies) was lost, it seems there should also be significant damage to the A quire, or the A quire should be missing. That it appears inside the book completely undamaged suggests that the damage occurred prior to alterations in the text block. Even more puzzling is that the book was rebacked, instead of rebound, in the 19th century, and typically rebinding does not involve reordering the quires. This could mean that when the book was originally purchased as loose quires, the original owner chose to bind the A quire after 3Z.

4. This paper grew out of a project conducted by my colleague at Texas A&M, Mark Houston, and myself. He contacted the booksellers, and I contacted the institutions and did the collation formulae on all of the texts.

5. This result is suspect because the misspelling of 2N was not a question asked in the letter initially sent out. It is included here both because it is an error that was reported, and because it again underscores the need for some sort of comparative collation of these early texts so that scholars know not only what differences are there, but also what questions to ask.

REFERENCES

Bower[s], Fredson. 1962. *Principles of Bibliographical Description*. New York: Russell and Russell.

Johnson, Frederic. 1934. *A Critical Bibliography of the Works of Edmund Spenser*. Baltimore: Johns Hopkins University Press.

Gaskell, Philip. 1972. *A New Introduction to Bibliography*. Oxford: Oxford University Press.

McKerrow, Ronald B. 1994. *An Introduction to Bibliography for Literary Students*. New Castle: Oak Knoll Press.



Killing III by Denise Hawrysio, 1989. Courtesy of the artist.

EXPLORING THE BOOK(CASES):

THE ART OF BOOKS, MUSEUMS, AND DIGITAL CULTURE

“What are books? The history of the book, or an imagination of a book: this would be an interesting theme for a school project.”

– M.C. Richards, *The Crossing Point*

“Worried about your book?”

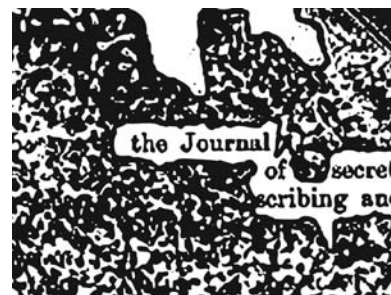
– Lynda Barry, *What it is*.

“Say make me, remake me. You are free to do it and I am free to let you because look, look. Look where your hands are. Now.”

– Toni Morrison, *Jazz*

HISTORICALLY, MUSEUMS HAVE OFTEN been linked with books. Museum education theorist Hilde Hein reminds us that the prototypical museum was (in the oldest sense) a “temple of the muses, a ‘sylvan grove’ to which scholars repaired ... amid books” (2000: 5). As an artist, poet, and art educator, I myself harbor a passion for books: a love for both their conceptual content and their physical and aesthetic presence. Toni Morrison, in the closing to her novel *Jazz* (1992), calls attention to this through the voice of the narrator addressing readers, pointing out that the act of reading the book entails touching and interacting. She also notes how readers are actually holding and, in some manner, remaking the work. I conceptualize artists’ books as a unique metaphorical threshold between text/narrative and image/object with rich poetic, visual, and tactile content. Within the context of a museum, these handcrafted and handheld artifacts of material culture offer a window into the potentialities and problems of the book arts, particularly in the overlapping contexts of digital culture.

While the concept of visual culture has been applied to examples of advertising, news media, and the internet (Duncum 2002; Freedman 2003), we may understand material culture studies as explorations of histories and cultures surrounding visual culture objects and also of artifacts made by humans, including fine art (Ulbricht 2007). Artists’ books are especially interesting archival sources, for they are poised between art and artifact as objects of record, commentary, and artistic expression. Further, the book form as a somewhat antiquated art object among emerging forms of digital documentation elicits a parallel creative process of historical inquiry and contemporary innovation. I have come to believe that just as book arts encompass reconceptualizations of text and image,



Courtney Lee Weida is Assistant Professor of Art Education at Adelphi University. Courtney has a background in Visual Art and English Literature. She has worked in schools, museums, and other art education settings.

Courtney Weida may be contacted at cweida@adelphi.edu.

digital media—such as wikis, blogs, and online social networks—serve to dovetail, extend, and reflect (and indeed are themselves reflected by) questionings of the book page, the author, and multiple editions and alterations of artists' books over time.

ART HISTORIANS MAY LOCATE artists' books within varied spaces and (book)cases: from the halls of museums to private collections, from libraries to art classrooms, and within contemporary museum studios. Digital spaces like ArtStor and online library collections also contain artists' books. The unique historical contexts of book arts engage particular art historical analysis, within which artists' books could be traced back to illuminated medieval manuscripts as well as the works of William Blake as a sort of legacy. Contemporary artists, such as Lynda Barry, whose books intersect book arts, graphica, and diary genres, exhibit a profound knowledge of their media's history, including references to the lineage of bookworks and William Blake's work. Book artist Johanna Drucker

(2004) has recognized the artistically inscribed early notebooks of Emily Dickinson as prototypes of today's book arts. Robert Warner even created artist books commemorating Emily Dickinson's words

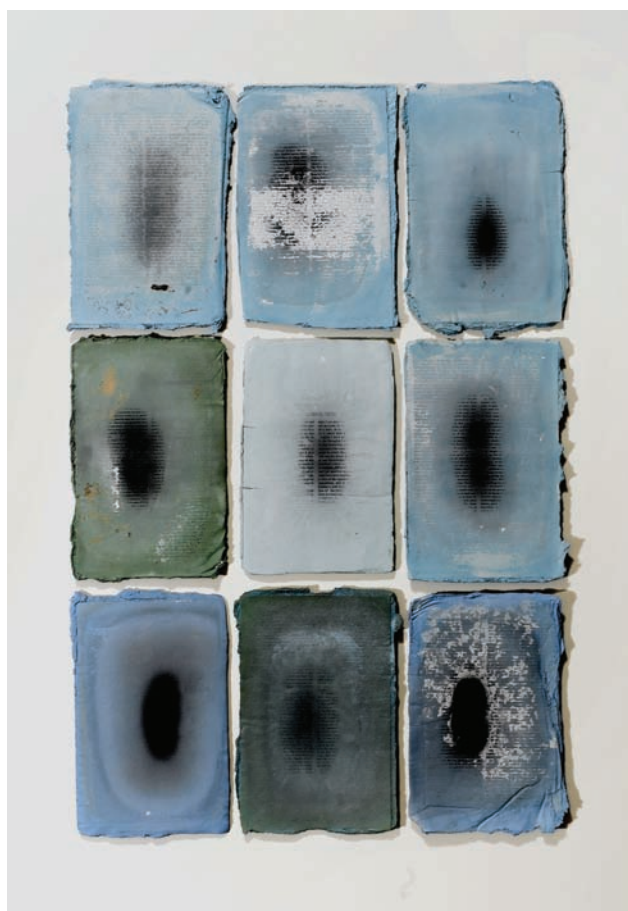
Artists' books are poised between art and artifact as objects of record, commentary, and artistic expression.

and images. Such contemporary bookworks challenge traditional notions of the book, structurally and conceptually, even as they pay homage to earlier book objects.

Other investigations and challenges of word and text include Denise Hawrysis's unconventional fur-lined book object, *Killing III*. This is a work without text that functions as protest against violence towards animals, for neither the book nor the animals for which it advocates use the printed word to communicate. Meanwhile,

Barbara Hashimoto's ceramic codex piece, *Returning to Tabulae Rasae* (literally: "scraped tablets"), metaphorically explores experience, identity, and pre-cognition within the blank slate. As an educator, I have explored such interesting works with Fred Wilson's interrogative archaeology (2002) in mind as an overarching museum education approach. Interrogative archaeology invites us to question and reconfigure museum objects and curatorial choices in text and meaning, challenging authority and structure. Artists' books and the frameworks of material culture in which they exist uniquely illuminate issues of object, image, and text. Specifically, the book as a kind of art and archival media is often particularly self-conscious of its function of initiating a dialogue with the viewer (reader), encouraging viewers to interweave their own questions with regard to the object and those self-reflexive inquiries the book has posed.

The Smith College Museum of Art recently featured a multifaceted exhibition called "Poetic Science: Bookworks by Daniel E. Kelm," (2007) which exemplified the ways in which bookworks go beyond the boundaries of the printed word. Kelm, a bookbinder, teacher, chemist, and storyteller, views his process as part chemistry, part alchemy, and part collecting. His innovations in bookbinding meet unique conceptualizations of the book as an object, including such pieces as *Frankenstein*, a codex containing a monster hand; and *Mars*, which is a folding book that includes



Returning to Tabulae Rasae by Barbara Hashimoto, 2005.

an actual meteorite (see page 12 of this issue). These formats demonstrate the interplay of narrative, collection, and artifact that can reconfigure the book as a canvas or vessel for an actual object.

MUSEUM THEORIST HILDE HEIN notes that all “physical objects ... signify within narrative systems” (2000, 31). In other words, an object such as a book might bring to mind stories and contexts of libraries. Typically, although books are catalogues or collections that may contain narratives, we might not expect a book to contain physical objects. Kathleen McLean asserts that often “books are relatively uniform media that deliver an experience to physically passive individuals” (1999: 86). Recent bookworks exhibitions and associated programs pose counterpoints to our perceptions of uniformity and understandings of systems of narrative structure. All museum objects can be approached as containing narrative features, and yet book arts may consciously resist and revise particular narratives. It is the range of narrative features of text and image in book arts that invites a unique framework of looking, reading, and thinking. Further, Gary Frost contrasts traditional formats of library books with that of unusual artists’ books in terms of their unique tactility and mobility in the hands of a viewer, “overcom[ing] conventions of the stacks” (2005: np).

Children encountering bookworks can combine conventional text reading with thoughtful explorations of different literary and artistic modes (origami formats, sculptural books, altered books, sketchbooks, weblogs, etc.). Addressing literacy in education, Ted Ansbacher writes of instruction in which “learners [could be] introduced to books as aesthetic and cultural artifacts” (1998: 29). In this spirit, students in the museum may encounter a variety of book formats, then engage with activities that help them to look closely at and ask in-depth questions about examples of these formats and their various meanings. Finally, museums with studio resources also enable students to explore interactive activities to create their own bookworks. It is this very capacity for multimodal learning that has inspired museum education theorist John Falk to assert that “museums have emerged as the ‘poster children’ of the Knowledge Age leisure landscape; everyone wants to be like museums” (2009: 56).

Tim Rollins, an artist and educator, engaged his students in related book arts activities through the “Kids of Survival” afterschool program and exhibitions in museums and galleries. In one exploration, high school students created altered books, using canonical texts as canvases for contemporary paintings of parallel themes in their own lives. Learning experiences like these not only serve goals of print literacy but also address important issues of aesthetic education. Further, this sort of project does not assume passivity of the learner, but rather encourages analysis and direct interaction with

Book arts may consciously resist and revise particular narratives.

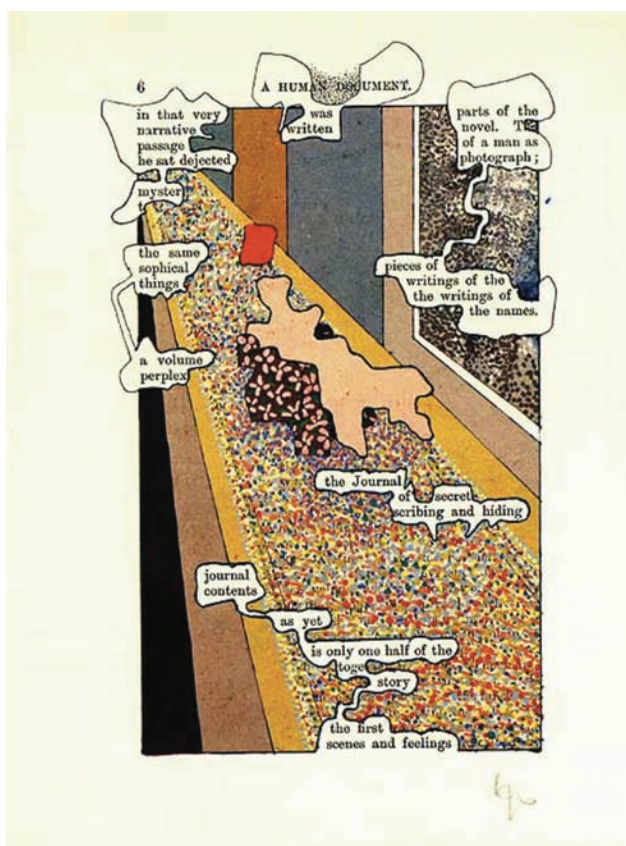
the text. The narrative becomes richly literary, visual, and contemporary through the combination of the original text, the evolving story, and the added images that make up altered books. As book artist and educator Paul Johnson has noted, children’s explorations with book forms not only engage them with learning about books, but actually can change the field of book arts as well by engaging students with the valuable experience of adding new book formats to the broadening field (1993).

THE THINKING WE CAN DO through and about book formats is related to their special look and feel. Johanna Drucker (2004) has conceptualized art books and bookworks as “auratic objects,” for they have a unique presence. This term reminds us of the aura, the atmosphere and character that surround bookworks. The notion of aura is particularly notable in our digital age, in which many students have interacted with computer text and electronic media more frequently than, and often prior to, printed texts. Altered books are perhaps the prototypical blog, as they allow us to “enter” and alter a text again and again. This can especially be seen in Tom Phillip’s *Humument*, a Victorian novel he has altered within several editions.

Altered books are perhaps the prototypical blog.

However, altered books maintain a physical presence as objects and artifacts, with the culmination of each set of processes made visible within each iteration.

On a wide enough continuum, the consideration of artists’ books or bookworks might also include



Page 6 from *A Humument*, Tetrad Press Edition, by Tom Phillips, 1970[-75].

formats of contemporary scrapbooks and journals. Lynda Barry's work, *What it is*, questions the word and the image continuously in a graphic novel and diary-like format. Barry refers to her book as the space (mentally, imaginatively, and philosophically) where her entire life history is "still alive" (2008: np). Meanwhile, the collaboratively authored and illustrated *To Die No More* is a compilation of various quotes, primers, and practices pertaining to death throughout the course of history. This sort of catalog is both discursive and archival, and perhaps evokes the life of the book form as well as human life. Book artist and English professor Rosamond King also provides a sort of collection or catalogue in her work. Her recent piece, *Commemorations*, is both an object of celebration for the particular moment of Barack Obama's inauguration, and a set of historic "firsts" within African American history across several fields and time periods.

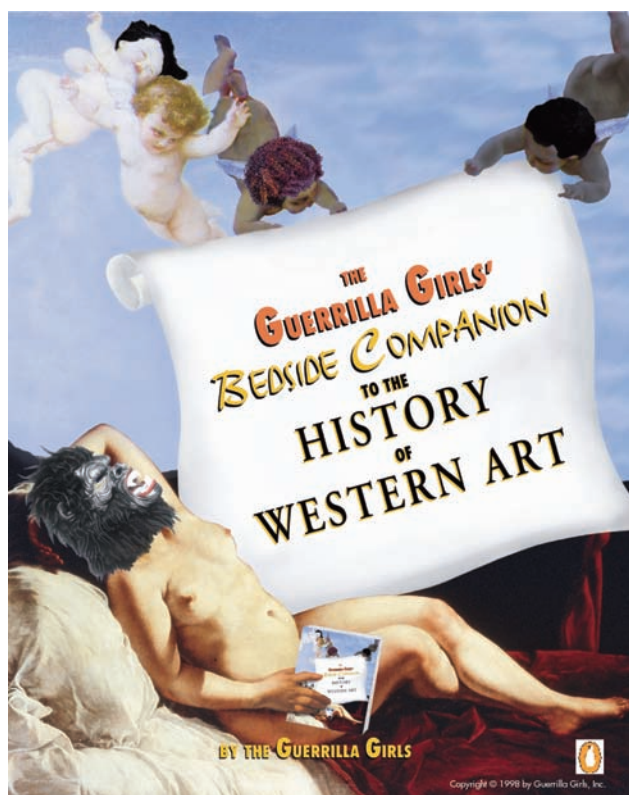
Pablo Helguera created the *Manual of Contemporary Art Style* (2007), a book which both mimics and mocks the parallel processes of formatting in writing an academic paper versus writing as an artist. This



Commemorations by Rosamond S. King, 2008.

often satirical book questions the idea of a singular model or style of contemporary art, even as it adopts the format of a manual. We might consider this kind of editorializing and ironic writing alongside digital sources like Wikipedia to invite our students to interrogate all sorts of authorial presences with a healthy approach of criticality, humor, and skepticism. In other words, the format of a manual or online encyclopedia should not, in and of itself, lend seriousness or credibility to the author(s). At the same time, much can be learned from artists and those outside traditional positions of authorial authority. Artist-authors such as the Guerilla Girls provide alternative art histories that are told with satire, cartooning, collage, and other forms of visual commentary with a feminist twist. These texts also question the authority of authors and canons by debunking these sources and promoting alternatives.

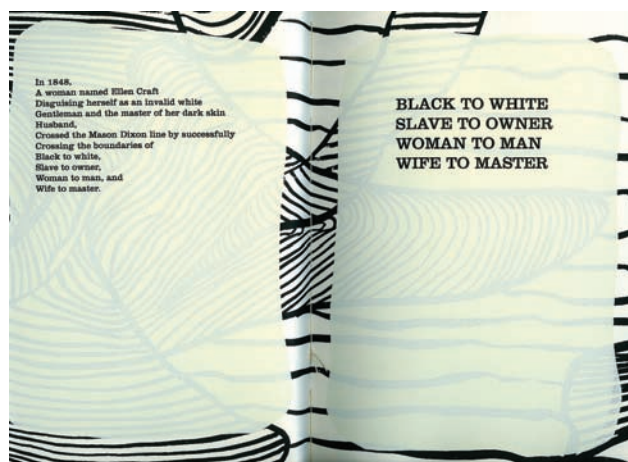
Other texts engage the possibility of juxtaposing multiple narratives and perspectives. Clarissa Sligh's *Wrongly Bodied Two*, produced at the Women's Studio Workshop, weaves together the stories of two people. One narrative transgresses gender



Cover image from *The Guerrilla Girls' Bedside Companion to the History of Western Art* by the Guerrilla Girls, 1998. Courtesy of www.guerrillagirls.com.

boundaries through the character Jake's modern-day transformation from female to male. His experience parallels that of Ellen Craft, a nineteenth-century Black woman, who escapes slavery by passing as a White man. The idea of "passing" and the concept of gender are explored in both narratives, although each belongs to its own time period and sociocultural identity. This too speaks to the temporal and contextual shifts involved in hypertext and our navigation of digital media.

THE OVERLAPPING THEME of embodiment through time and space is one that perhaps addresses both archival processes of museums and the discursive nature of the internet. The archival quality of the book arts is enhanced by fluidity in artistic and record-keeping processes. While traditional books may be akin to time capsules with closed-endedness, artists' books often contain visible revisions and commentaries on themselves, and can speak across time and page in a manner parallel to hypertext. The field of book arts symbolically influences new digital formats, and these new works persist as precious tactile, auratic



Pages 8 and 9 from *Wrongly Bodied Two* by Clarissa Sligh, 2004.

museum objects for us to read, to see, and to know (even though we may not always actually need them as primary archival formats). As Paul Johnson has noted, we are inundated by printed texts and images in every part of our lives, and yet the book form is a simultaneously private and public space and object that we choose to attend to mindfully (1993).

Caroline Jones characterizes art that uses early technology in a fetishized manner as "residual"

Artists' books can speak across time and page in a manner parallel to hypertext

(2006). In many ways, bookworks fall into this category of residual, nostalgic technologies. Our nostalgia for books is meaningful, as it affects the ways in which our society makes, reads, and collects them. Rare and unusual works of book art (such as those referenced here) are paradoxically new and old in their contexts, for we know them through traditional museum collections and library archives and/or through an increasing number of digital records online, such as art historical databases and gallery websites. As quoted in *To Die No More*: "I would wish that they might find with every new orbit that life affords us successors on whom the whole sum of love and belief dedicated to them might be carried on" (2008: np).

This paper is adapted from a presentation during the Media In Transition Conference at the Massachusetts Institute of Technology on April 24, 2009.

RESOURCES

<<http://www.tomphillips.co.uk/humument/0/001010/index.html>>

This website provides links to pdf files of the altered book pages by Tom Phillips.

<<http://www.makingbooks.com>>

This website offers tips and examples for book arts with children.

<<http://www.princetonol.com/groups/iad/lessons/middle/Linda-books.htm>>

This website features a lesson plan on altered books.

REFERENCES

Ansbacher, Ted. 1998. "John Dewey's Experience and Education: Lessons for Museums." *Curator* 41, no. 1: 36-49.

Barry, Lynda. 2008. *What it is*. Quebec: Drawn and Quarterly.

Drucker, Johanna. 2004. *A Century of Artists' Books*. New York: Granary Books.

Duncum, Paul. 2002. "Clarifying Visual Culture Education." *Art Education* no. 3 55: 611.

Falk, John. 2009. *Identity and the Museum Visitor Experience*. Walnut Creek, CA: Left Coast Press.

Freedman, Kerry. 2003. *Teaching Visual Culture: Curriculum, Aesthetics, and the Social Life of Art*. New York: Teachers College Press.

Frost, Gary. "Reading by Hand: The haptic evaluation of artists' books." *The Bonefolder*, 2, no 1. (Fall): 3

Hein, Hilde. 2000. *The Museum in Transition, A Philosophical Perspective*. DC: Smithsonian.

Helguera, Pablo. 2007. *Manual of Contemporary Art Style*. New York: Jorge Pinto Books.

Johnson, Paul. 1993. *Literacy through the book arts*. Portsmouth: Heinemann.

Jones, Caroline (Ed). 2006. *Sensorium: Embodied Experience, Technology, and Contemporary Art*. Cambridge: MIT Press.

McLean, Kathleen. 1999. "Museum Exhibitions and the Dynamics of Dialogue." *Daedalus* 128, no. 3: 83-107.

Minta, Kristofor (Ed). 2008. *To die no more*. New York: Blind Pony Books.

Morrison, Toni. 1992. *Jazz*. New York: Vintage.

Richards, M. C. 1964. *Centering: in Pottery, Poetry, and Person*. Middletown, CT: Wesleyan University Press.

Ulbricht, J. 2007. "Reflections on visual and material culture: An example from Southwest Chicago." *Studies in Art Education*, 49, no. 1 (2007): 59-72.

Weida, C. 2009. "Material Cultures and Artists' Codices: Museum Education With Artists' Books." Paper presentation, MIT Media in Transition 6 Conference, Cambridge, MA. April 24.

Wilson, F. & Gonzales. 2002. "Objects and installations, 1979-2000." In J. A. Farmer, A. Gardner, & M. Berger (Eds). *Issues in Cultural Theory*, no. 4.



Truculent Creatures by Rand Huebsch. 1994. Accordion book, twelve panels, un-inked embossment on Canson Mi-teintes, 3 1/4"h x 50"w, edition of 75. Photo by Daniel Falgerho.



Reptiles by Rand Huebsch, 1996. Accordion book, eight panels, each panel 7"h x 9"w, etchings on Arches paper, with embossed covers (on Canson Mi-Teintes), edition of 75. Photo by Daniel Falgerho.

ACCORDION AND TUNNEL BOOKS:

TWENTY YEARS OF EXPLORATION

For the past twenty years, I have made limited-edition accordion and tunnel books and have found that the basic simplicity of both formats allows for much experimentation. I think of the books as paper sculptures to be handled and explored. Most have been without text (apart from title information), so viewers are free to supply their own narratives for the books' imagery. I produce that imagery almost solely by etching¹, a process whose tactile aspect I enjoy. In the same way, I appreciate the manipulation of elements in constructing a book.

ACCORDION BOOKS

The accordion book is well suited for display upright and extended, like a folding screen, so the viewer can scan all of the images at once. Therefore, while my books usually have a discrete image in each panel, I design them with the entire image sequence in mind. *Reptiles*, influenced by Medieval bestiaries, consists of a series of etchings that illustrate basic animal activities. It uses a different species for each panel, to represent a life cycle: the eggshell shape in the first scene is echoed by the waning moon in the last one. Although the reptiles are in an Expressionist style, I did do research on the creatures depicted, and the Latin taxonomic names are genuine. The image on the inside back panel is a colophon obliterated by geckos; only the first words, "this book," are legible. The book was in fact part of a group project, in which fifteen artists each produced an edition of an accordion book based on the reptile theme, then made an exchange with everyone else. All books had to be eight pages of the same dimension. Unlike my book, Anneli Arms' version uses a vertical orientation for each page, and her leaping frog etchings are made on shaped metal plates, rather than on the usual rectilinear plates.

The outer front and back cover images (applied to book board) of my *Reptiles* are embossments, made by a technique that is a variation of traditional etching. It is a process I use to make elements in most of my books and reflects my long-standing interest in Mayan and Egyptian stone carvings. Embossing plates are designed and etched so that, when printed, they produce raised images on paper that are similar to bas-relief sculptures. My preferred paper is Canson Mi-Teintes, as it slightly lightens in the raised areas of the paper, which then has the look of tooled leather. *Truculent Creatures* is one of my books that consists solely of uninked embossments. When its front and back covers are placed in apposition, the two rams appear to be in combat.²



Rand Huebsch is a printmaker, book artist, and teacher. In 1986 he co-founded the Manhattan Graphics Center, a fine-art printmaking workshop. He has also curated print exhibitions, including two for the New York Hall of Science. His technical articles have appeared in the British quarterly Printmaking Today and the quarterly publication of the Movable Book Society. Among the collections holding his work are those of the Victoria and Albert Museum, the Cambridge University Library (Rare Books Division), the Detroit Institute of Arts, the Fogg Art Museum, and Yale University. His website is <<http://www.randhuebsch.com>>.



***Biblion* by Rand Huebsch, 2005. Accordion book, ten panels, each 3" h x 5" w, uninked embossment on Canson Mi-Teintes papers, edition of 75. Photo by Daniel Falgerho.**

Biblion is another such book, but it has a continuous narrative flow. For example, a grouping of figures is divided between two adjacent panels, as are, in one case, a building and an ox. Whereas the title text for most of my embossed books is raised, in *Biblion* it is indented—an allusion to the recessed hieroglyphs in Egyptian stone carvings. The book's earth-colored paper also refers to the geography of the region that gave rise to the images inspiring the book. A different kind of narrative flow is presented in Susanna Bergtold's *X*, with its implication of a primer in arithmetic, and the increments of images as numerals.

One can hand-color embossments by rubbing crayons, held almost at a horizontal, over the raised surfaces of the design, so the recessed areas of the paper do not change color. This approach is especially effective when the paper is colored and the embossed imagery is strongly linear, almost woodcutlike. Among the books in which I've used this premise are *Canterbury Tales*, whose figures are meant to evoke tomb carvings, and *Aviary*, which was inspired by Medieval ivory plaques and illuminated manuscripts.



***in a hot dry place* by Rand Huebsch, 2006. Accordion book, 8 panels, each 6" h x 5" w, etching on Rives paper; covers are made from uninked embossment on Canson Mi-Teintes papers, edition of 50. Photo by Daniel Falgerho.**

Several years ago I started to include short texts in some of my books. For *in a hot dry place* the words came to me when I was half-awake and visualizing the animal imagery I had already sketched. It is a single sentence, sectioned to all eight pages of the book: "in a hot dry place/where the wind/only rarely rises/only rarely spirals down/soundless/against dense earth/the dangers of the day/shimmer in every glance." In her richly colored *Handle with Care*, Cynthia Back has very minimal text (one word on every other page), as a subtle commentary on her nature imagery. For *Muybridge Sequence* I used only its covers for text. On the front, each letter of the title is enclosed in a compartment, to echo the sequentiality of Muybridge's photographic work. On the back is text that echoes the interior imagery: "...shifting its weight through the succession of shadows and light...in acquiescence to the surrounding wind, to the sound of its body moving through time...marching, on a mere membrane of glass, into uncertainty..."



***Muybridge Sequence* by Rand Huebsch, 2007. Accordion book, etchings, eight panels, each 4" x 5", edition of 25. Photo by Daniel Falgerho.**

TUNNEL BOOKS

The tunnel structure has existed since the Italian Renaissance, when artists used it to study perspective concepts for their paintings. It consists of a series of parallel image-bearing panels that, except for the solid back panel, have cut-out areas. The panels are attached, by hinges on two sides, to accordion-folded strips. I enjoy the way in which the theater-like scene alters when the viewer changes position vis-a-vis the book. In addition, the format entails a nice tension between the visual autonomy of each panel and that of the entire piece. Historically, tunnel books often had ten fairly simple panels, but my books usually consist of four, each holding much information. While the

tunnel book is a centuries-old format and increasingly used by book artists, I believe that it is still largely unheard-of and underexplored.

I started making tunnel books in 1990 after seeing a show of children's books at the Morgan Library³ that included two examples from the nineteenth century, when such books were called "peepshows," in keeping with their hide-and-seek aspect. *Not out of the Woods yet*, my first book, has panels of two-ply museum board printed with creature etchings that I hand-colored with washes of Caran d'Ache crayon. The accordion elements of a tunnel book can comment on the panels: the strips for *Woods* were printed on their exterior sides with etchings of more creatures and, on their interior sides, with images from hand-carved rubber-stamps.



***Not out of the Woods yet* by Rand Huebsch, 1991. Tunnel book, 5"h x 6 1/2"w x 8"d, five hand-cut panels, hand-colored line etchings, accordion strips printed with etchings on exterior side and relief blocks on interior sides. Photo by Daniel Falgerho.**

For several books that use the embossing and hand-coloring methods described above, including *Table 2*, I first made a prototype by drawing with colored chalk on sheets of black paper, cutting out areas within the sheets, and seeing how the various panels related to each other. Those cutouts were the basis for making printing plates with which to emboss on black museum board. After cutting away the non-image areas of the embossments, I did the hand-coloring. As the recessed linear areas remained black, the finished panels had a stained-glass appearance. For *Table 1*, however, I did not make a prototype for creating the printing plates. Instead I experimented with copies of four unrelated embossments that I had done at



***Fable 1* by Rand Huebsch, 1998. Tunnel book, four hand-cut panels, hand-colored embossments (with Caran d'Ache) on black museum board, side strips printed with hand-carved rubberstamps, 5"h x 8"w x 9"d, edition of 50. Photo by Daniel Falgerho.**

various times, trying out both their sequence as book panels and also the shapes of cut-out areas until I found what seemed the best combination.

AESTHETICS OF THE TUNNEL BOOK

The tunnel book has a paradoxical nature: it's a theater-like three-dimensional structure comprised of two-dimensional elements. That dichotomy allows for much stylization in image-making; perspective can be forced, in the manner of a museum diorama. For example, the front panel of *As You Like It* depicts only the upper body of a Shakespeare character. He looks directly at the viewer, and his arms form a framework that encloses the succeeding panels, in which the figures are full-length and therefore smaller. *The Musicians of Bremen*, based on a Grimm's tale, depicts interior/exterior space. On the right side of each of the four panels, a braying farm animal stands outside a cottage; on the left side, within that cottage, is a frightened, crouching or leaping human figure. For tunnel image ideas one can refer to interior scenes by the Dutch painter Pieter de Hooch; Persian or Indian miniatures, for their non-Western perspective; and German Expressionist films, such as *The Cabinet of Dr. Caligari*, with their stylized lighting and distorted sets.

With its linked parallel planes, the tunnel book can imply a metamorphosis or a series of events. In *Circe 2* I present a chapter from the *Odyssey* in which a sorceress transforms sailors into swine. In the backmost and "earliest" panel, she offers a bowl of potion to an unsuspecting man. In the next panel, a pig-headed

human figure appears, and so on, until the frontmost panel, where a swine leaps. In *As You Like It*, each panel presents a separate scene from the play. Unified, they comment on each other, so the book recalls those early Renaissance paintings that simultaneously displayed several episodes of a saint's life in a single landscape setting.

One can exploit the tunnel's architectural aspect. My *Wunderkammer of Rudolph II* presents the kind of Renaissance room called a "cabinet of curiosities," and a student made elaborate, calligraphic cut-outs within the mosque-shaped panels of her book. It should in fact be emphasized that, while they have traditionally been rectangular, tunnel panels can be shaped in a wide variety of ways (just as the book's connecting strips can have irregular shapes, as well as cut-out areas). For example, Carol Barton's silk-screened book, *Tunnel Map*, makes use of circular panels.



Tunnel Map (cover and interior) by Carol Barton

While text has appeared only minimally in my own work, it can be used on any or all of the tunnel book's many surfaces. One of the two connective strips of *Circe 2* shows, Muybridge-like, an owl's flight, and the other strip presents the text version: "within the wingbeat of an owl, they howl from men to beasts." In each case, the exterior of the strip was used, so the viewer can see only one version at a time. A student in one of my classes made a visual journal in which she adhered elements from travel photos to panels that were framelike in shape. Onto both the panels and the connecting accordion strips, she rubberstamped Japanese ideograms. In her tunnel book, Laura Davidson uses the text elements more abstractly: "*Florence* was based on a photo that I took from the steps of San Miniato al Monte looking down on the city below. The images were drawn directly on Baedeker travel guidebook pages."



Florence Laura Davidson, 2003.

ACCORDION AND TUNNEL BOOKS: POSSIBILITIES

The possibilities for accordions and tunnels are endless. For example, both sides of an accordion book can contain information, and, if there are enough panels to a book, it can be presented upright and configured so the viewer can see some panels from side A and some from side B, in a kind of dialogue. Scale is an element to play with, and Susan Share actually performs with her large, accordion-like pieces, such as *Zip-off Fence*, which often have additional moving parts. There is also a kinetic aspect to my toy theater/tunnel book *The School for Scandal*—based on Sheridan's satirical play—where the figures have movable parts to which strings are attached, so the viewer can manipulate the play's manipulators. (In one panel the fop's jaw and outstretched arm are hinged and can be raised and lowered as the character pontificates.)



The School for Scandal by Rand Huebsch, 2002. Unique tunnel book/toy theater with movable parts, 12"h x 15"w x 12"d. Foam core, cardboard, Caran d'Ache crayon, ink, string, wire. Photo by Marcia Rudy.

The tunnel structure might in fact be used, if made of lightweight foam core, as an actual stage set that could easily be moved on and off stage. And one can image a hybrid tunnel/accordion structure, similar in some ways to a carousel book, in which the tunnel aspect of each accordion segment presents the history of the figures in the front panels, so that past and present coexist in the book.

CONSTRUCTING THE TUNNEL BOOK

Once I realized that the tunnel book traditionally is comprised of three elements—panels, accordion strips, and hinges—I started to experiment with those elements. Since then, I have learned of variations on the premise, as well as several techniques, such as the one used by Ed Hutchins, to make a book out of a single sheet of paper. The following instructions are for the technique I first used and that still works best for me.⁴

To construct the book, only a few materials are needed (see fig. #1): pencil, ruler, white glue, bone folder, scissors or X-ACTO knife, protective cutting board, such as a Plexiglas sheet or a self-healing material, and images on paper. These can include prints, drawings, watercolors, rubber-stamp prints, xeroxes, collages, photos, text, or mixed media.



Figure 1

The tunnel book process is very intuitive. I make a construction-paper prototype in the following way (the number of panels and the dimensions listed are used as examples). After cutting four 5" x 8" panels, I sketch images on the perimeter of the first panel, then use an X-ACTO knife or scissors to remove the unwanted interior areas. (The knives are very sharp and should be used carefully.) I place the first, front panel over the second panel and trace the interior contour onto it, to serve as a rough guide for the second sketch, and so forth. Remember that the backmost



Night Desert by Rand Huebsch, 1998. Tunnel book, four panels, hand-cut, hand-colored embossments (with Caran d'Ache) on black museum board, side strips printed with hand-carved rubberstamps, 5"h x 8"w x 9"d, edition of 50. Photo by Daniel Falgerho.

panel remains solid. If planning an edition, I use the four completed panels as rough guides for making the finished drawings that will ultimately be transferred to the copper plate, which will then be etched.

When designing a book, it is important periodically to set the panels in an upright position, one in front of the other. This helps you visualize their interaction. For example, you may see that the visual balance needs adjusting and can then cut away or add elements. For many years I used ink bottles or paper cups to prop up the panels. Now, for that purpose, I make wire easels, which are much steadier supports and make it easier to experiment with the spacing between panels. (When deciding on spacing, sit fairly close to and at eye level with the panels. That will let you know if they form a solid vista or if, instead, there are visual "leaks" between panels.) I based the easel design on the stands used for displaying small photos that have a lip to keep the image in place. Sixteen- or eighteen-gauge wire is a good thickness; it can easily be bent but is strong enough to support paper (see figs. #2 and #3). The wire can be cut with inexpensive,

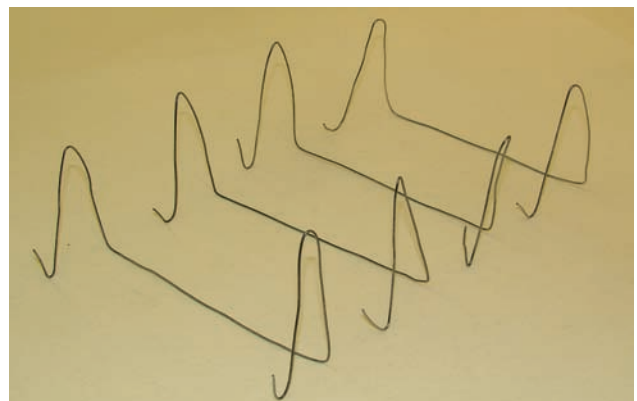


Figure 2



Figure 3

small wire snippers from the hardware store. When making the easels, you can cut the lengths of wire in advance or draw out a length of wire from the spool, shape it, then snip it off. This second approach makes handling the wire more manageable. In either case, use the first easel as a template against which to bend the rest of the easels.

You can also adapt a two-dimensional image for use in multiple panels of a tunnel book: allocate some of its elements to the front panel, some to the second, etc. It will soon become evident, however, that the book's extra dimension makes additional demands. Recently I adapted a Renaissance painting of a deep-space interior, in which curtains framed the scene. The question arose: in a three-dimensional version of that scene, what is behind the curtains? Part of my answer was to use the same curtain imagery on both the first and second panels of the book.

The number of panels for a book is often determined by the degree of complexity in each, as well as the amount of overlap. The British books that first inspired me had at least ten panels, each one fairly simple. That same number is contained in Edward Gorey's *The Tunnel Calamity*, which has a peephole on the front cover. I usually put a lot of information into each page, with considerable overlapping, so four panels are generally sufficient for my books. Sometimes I make several options and, using the wire easels, see how each one relates to the other panels in the series.

The accordion strips that connect the panels tend to contract slightly at the folds once the book has been

placed upright. Therefore, if you want a two-inch space between panels, measure a two-and-a-half-inch section on the strip. To support the panels, the strips must be of sufficient width. For example, on a book that is six inches high, use a two-inch-wide strip and position it at the midpoint of the panel. In measuring paper for accordion strips, remember to factor in the additional length that will allow for tabs to attach to the back of the front panel and the back of the backmost panel. Bone folders are excellent for scoring the strips and the hinges that will attach them to the panels.

Hinges are used only on the book's interior panels, and they should not be made of heavy paper, as it will not score well. The hinge, when scored and viewed from the side, is essentially a V-shaped piece of paper. If the accordion strip to which one side of the hinge will be attached (the other side being attached to the back of a panel) is, for example, two inches in width, make sure to measure the paper for the hinge so that, once cut, scored, and glued to the strip, it does not exceed that two-inch width and thereby become visible to the viewer. Also, if the length of one half of the accordion interval between panels is, say, three inches, the hinge side attached to that half should probably be no more than one and a half inches. I generally measure and score hinges so that each of the two sides is equal to the other side.

Once you have the three basic elements—panels, hinges, and accordion strips—cut and scored, you can start to assemble the book. First measure and mark the placement on the backs of the interior panels for positioning of hinges, and use the same measurements for all the panels (such as two inches from the bottom of each panel). I think it is best to start with the lower of the two marks, measuring up from the base of the panel. That way, if there is any discrepancy in the height of the panels, there will not be any problem with some of the panels not making full contact with the surface on which the extended book is placed. Each panel will need two hinges, one on the right side and one on the left. The marks will serve as guides so all the accordion strips will be aligned correctly with the panels (see figs. #4 and #5).

I first adhere the front tab of the accordion strip to the back of the front panel by brushing glue between the guidelines that have been drawn and all the way to the edge of the cutout area that will be covered by the



Figure 4

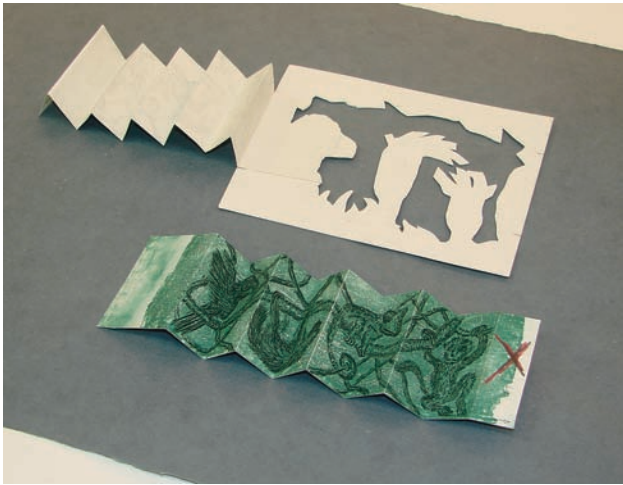


Figure 5

tab. I then follow the same procedure for the other accordion strip. Once the tabs are pressed down and the glue has dried, I use an X-ACTO knife or small scissors to carefully cut away the “overhang” tab papers that protrude beyond the shaped panels. This can be done once the book is fully assembled (see fig. #6).

Glue one side of each hinge to the back of each of the interior panels (for example, panels two and three of a four-panel book). You may want to measure the accordion strips so that there is enough paper to allow the two glued sections on the back of the book to

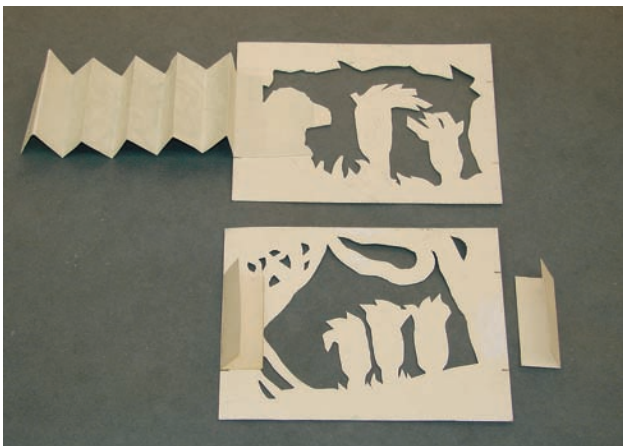


Figure 6

meet. Or if there is a gap between them, you can cover that by gluing a paper collage element on top.

When you glue the hinges to the panels, make sure each hinge’s fold is aligned with the outer edge of the panel. Then glue the strips, one panel at a time, to the loose tab of the hinges. Remember that the “mountain” fold of each accordion segment between panels faces inward. For all gluing, use a bone folder to press the elements together. Place a piece of tracing paper between the folder and the elements so that any excess glue will be picked up.

As sculptural pieces, tunnel books require a degree of engineering. For example, a small book does not need as sturdy a paper for stability as does a larger book. To strengthen the structure, the paper or board for the front and back panels should be heavier than that of the interior panels—for example, card stock for inner panels and two-ply museum board for covers. Also remember that the book may be viewed when it is collapsed. If you don’t want the side strips to be visible then, the panels must be at least as wide, at the hinge point, as half the length of the strip segment between two panels. (In designing my books, I have not been concerned about this issue.)

NOTES

1. Because etching has been so integral to my book work, a brief description follows: Etching was invented in Germany 500 years ago and has been a print medium for Rembrandt, Goya and Picasso, among others. It is ideal for creating images with the look of pen-and-ink lines and hatchings. The artist covers a metal plate, usually copper or zinc, with an acid-resistant, wax-like liquid. When that substance has dried, a metal stylus is used to remove some of it, to expose areas of metal. Those areas will be etched when the plate is put in acid: they will later create the image on paper. When the lines have been etched, the artist removes the resist material from the plate and applies a paste-like ink into the grooves. The ink is transferred from the plate to paper by use of a printing press. For each additional impression, the plate must be re-inked and printed again. (For more information, see <<http://www.randhuebsch.com/eplorations/newsletter.html>>.)

2. For more on the embossing process, see <<http://www.randhuebsch.com/makeimpression/newsletter.html>>.

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3. The exhibition was entitled “Be Merry and Wise: The Early Development of English Children’s Books.” A catalogue of the exhibition was published, entitled *Be Merry and Wise: Origins of Children’s Book Publishing in England, 1650–1850* (Brian Alderson and Felix de Marez Oyens, The British Library and Oak Knoll Press, in association with the Pierpont Morgan Library and the Bibliographical Society of America, 2006).

4. All photos accompanying the instructions are by John LoCicero.

ARTISTS’ WEB SITES

Anneli Arms: <http://www.anneliarms.com/>

Cynthia Back: http://www.inliquid.com/artist/back_cynthia/back.php

Carol Barton: <http://www.popularkinetics.com/>

Susanna Bergtold: <http://www.susannabergtold.com/>

Beatrice Coron: <http://www.beatricecoron.com/>

Laura Davidson: <http://www.lauradavidson.com/>

Rand Huebsch: <http://www.randhuebsch.com/>

Ed Hutchins: <http://www.artistbooks.com/>

Susan Share has a Facebook page.

